

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

FL ROBERTS SERVICE STATION (Continued)

S101505687

SHWS:

Facility ID:	1-0010145		
Site Status:	Tier 2 Classification		
Current Status:	PHASE 2 - Comprehensive Site Assessment.		
Transition Status:	Not reported		
Site Product:	Not reported	Site Type:	21E
Pub Involvement:	Not reported	LTBI Listing Date:	Not reported
Initiating Agency:	Not reported		
Action Taken by:	Not reported		
REQ Type:	Not reported	REQ Due:	Not reported
Date Confirmed:	Not reported	Date Deleted:	Not reported
Date Listed:	Not reported	Region:	Western
ERB Number:	Not reported	EPA Number:	Not reported
Response Action Submitted:	02/13/1997		
Response Action Type:	FEND		
Response Action:	TRANS		
Response Action Outcome:	Not reported		
Activity and Use Limitation:	/ /		
AUL Restriction Type:	Not reported		
LSP Number:	Not reported		
Action Taken:	Not reported		
Contained in Leaking Underground Storage Tank:	No		

MA RELEASE:

Facility ID:	1-0010145
Facility Status:	Not reported
Status Date:	Not reported
Phase:	Not reported
Notification:	12/28/1993
Category:	72 HR
Official City:	SPRINGFIELD
Action:	
Date:	12/30/1999
Type:	Phase IV
Status:	REMOPS
Lsp Number:	4813
Response Action Outcome:	Not reported
Activity Use Limitation:	Not reported
Action:	
Date:	01/07/1999
Type:	Phase III
Status:	Completion Statement Received
Lsp Number:	Not reported
Response Action Outcome:	Not reported
Activity Use Limitation:	Not reported
Action:	
Date:	01/07/1999
Type:	Phase II
Status:	Completion Statement Received
Lsp Number:	4813
Response Action Outcome:	Not reported
Activity Use Limitation:	Not reported
Action:	
Date:	12/28/1994
Type:	Tier Classification
Status:	Tier 2 Classification
Lsp Number:	4813

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

FL ROBERTS SERVICE STATION (Continued)

S101505687

Response Action Outcome: Not reported
Activity Use Limitaion: Not reported
Action:
Date: 12/28/1994
Type: Phase I
Status: Completion Statement Received
Lsp Number: 4813
Response Action Outcome: Not reported
Activity Use Limitaion: Not reported
Action:
Date: 12/30/1999
Type: Immediate Response
Status: Completion Statement Received
Lsp Number: 4813
Response Action Outcome: Not reported
Activity Use Limitaion: Not reported
Chemical Released:
Chemical: BENZENE
Amount: 24000, parts per billion
Location Type: Not reported
Source Type: UST
ASC Release Tracking Number: Not reported

9
NNE
1/2-1
4946
Higher

REXEL CORP.
203 WEST AVE.
LUDLOW, MA 01056

SHWS

S100829060
N/A

SHWS:

Facility ID: 1-0000119
Site Status: No Further Action
Current Status: PRE - M.C.P.
Transition Status: REMEDIAL
Site Product: Hazardous
Pub Involvement: Not reported
Initiating Agency: SAB - Information that has been discovered by the Site Assessment Branch of the Bureau of Waste Site Cleanup of the Massachusetts Department of Environmental Protection (DEP).
Action Taken by: RP ONLY
REQ Type: Not reported
Date Confirmed: Not reported
Date Listed: 01/15/1987
ERB Number: Not reported
Response Action Submitted: Not reported
Response Action Type: Not reported
Response Action: Not reported
Response Action Outcome: Not reported
Activity and Use Limitation: Not reported
AUL Restriction Type: Not reported
LSP Number: Not reported
Action Taken: Removal of the contamination source (such as drums, tanks or contaminated soil) to a licensed facility. Monitoring (i.e., via groundwater wells).
Contained in Leaking Underground Storage Tank: No

Site Type: 21E
LTBI Listing Date: Not reported
REQ Due: Not reported
Date Deleted: Not reported
Region: Western
EPA Number: Not reported

B10
ESE
1/2-1
4954
Higher

MOBIL OIL STATION
1828 BOSTON RD.
SPRINGFIELD, MA 01129

SHWS

S100829718
N/A

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

MOBIL OIL STATION (Continued)

EDR ID Number
EPA ID Number

Database(s)

S100829718

SHWS:

Facility ID:	1-0000833		
Site Status:	No Further Action		
Current Status:	P.A. L		
Transition Status:	L.T.B.I.		
Site Product:	Petroleum	Site Type:	21E
Pub Involvement:	Not reported	LTBI Listing Date:	10/15/1990
Initiating Agency:	ERB - Notifications and reports on spills referred from the Emergency Response Branch (ERB) of the Bureau of Waste Site Cleanup IncidenceResponse Office.		
Action Taken by:	RP ONLY		
REQ Type:	Not reported	REQ Due:	Not reported
Date Confirmed:	Not reported	Date Deleted:	Not reported
Date Listed:	Not reported	Region:	Western
ERB Number:	Not reported	EPA Number:	Not reported
Response Action Submitted:	10/17/1996		
Response Action Type:	DEP-CSD		
Response Action:	Not reported		
Response Action Outcome:	Not reported		
Activity and Use Limitation:	/ /		
AUL Restriction Type:	Not reported		
LSP Number:	Not reported		
Action Taken:	Not reported		
Contained in Leaking Underground Storage Tank:	No		

B11
ESE
1/2-1
4954
Higher

MOBIL OIL CORP SS#01-E43
1828 BOSTON RD
SPRINGFIELD, MA 01107

SHWS

S101696158
N/A

SHWS:

Facility ID:	1-0010261		
Site Status:	Tier 2 Classification		
Current Status:	PHASE 2 - Comprehensive Site Assessment.		
Transition Status:	Not reported		
Site Product:	Petroleum	Site Type:	21E
Pub Involvement:	Not reported	LTBI Listing Date:	Not reported
Initiating Agency:	Not reported		
Action Taken by:	Not reported		
REQ Type:	Not reported	REQ Due:	Not reported
Date Confirmed:	Not reported	Date Deleted:	Not reported
Date Listed:	Not reported	Region:	Western
ERB Number:	Not reported	EPA Number:	Not reported
Response Action Submitted:	02/14/1997		
Response Action Type:	FEND		
Response Action:	TRANS		
Response Action Outcome:	Not reported		
Activity and Use Limitation:	/ /		
AUL Restriction Type:	Not reported		
LSP Number:	Not reported		
Action Taken:	Not reported		
Contained in Leaking Underground Storage Tank:	No		

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

MOBIL OIL CORP SS#01-E43 (Continued)

S101696158

Facility ID:	1-0010437		
Site Status:	Tier 2 Classification		
Current Status:	PHASE 2 - Comprehensive Site Assessment.		
Transition Status:	Not reported		
Site Product:	Petroleum	Site Type:	21E
Pub Involvement:	Not reported	LTBI Listing Date:	Not reported
Initiating Agency:	Not reported		
Action Taken by:	Not reported		
REQ Type:	Not reported	REQ Due:	Not reported
Date Confirmed:	Not reported	Date Deleted:	Not reported
Date Listed:	Not reported	Region:	Western
ERB Number:	Not reported	EPA Number:	Not reported
Response Action Submitted:	02/14/1997		
Response Action Type:	FEND		
Response Action:	TRANS		
Response Action Outcome:	Not reported		
Activity and Use Limitation:	/ /		
AUL Restriction Type:	Not reported		
LSP Number:	Not reported		
Action Taken:	Not reported		
Contained in Leaking Underground Storage Tank:	No		

C12
WNW
1/2-1
5053
Higher

NOVACOR CHEMICALS
950 WORCESTER ST
SPRINGFIELD, MA 01151

SHWS

S102082795
N/A

SHWS:

Facility ID:	1-0010868		
Site Status:	Tier 2 Classification		
Current Status:	Not reported		
Transition Status:	Not reported		
Site Product:	Petroleum	Site Type:	21E
Pub Involvement:	Not reported	LTBI Listing Date:	Not reported
Initiating Agency:	Not reported		
Action Taken by:	Not reported		
REQ Type:	Not reported	REQ Due:	Not reported
Date Confirmed:	Not reported	Date Deleted:	Not reported
Date Listed:	Not reported	Region:	Western
ERB Number:	Not reported	EPA Number:	Not reported
Response Action Submitted:	03/14/1997		
Response Action Type:	FEND		
Response Action:	TRANS		
Response Action Outcome:	Not reported		
Activity and Use Limitation:	/ /		
AUL Restriction Type:	Not reported		
LSP Number:	Not reported		
Action Taken:	Not reported		
Contained in Leaking Underground Storage Tank:	No		

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

NOVACOR CHEMICALS (Continued)

S102082795

Facility ID: 1-0010869
Site Status: Tier 2 Classification
Current Status: Not reported
Transition Status: Not reported
Site Product: Both Hazardous and Petroleum
Pub Involvement: Not reported
Initiating Agency: Not reported
Action Taken by: Not reported
REQ Type: Not reported
Date Confirmed: Not reported
Date Listed: Not reported
ERB Number: Not reported
Response Action Submitted: 03/14/1997
Response Action Type: FEND
Response Action: TRANS
Response Action Outcome: Not reported
Activity and Use Limitation: / /
AUL Restriction Type: Not reported
LSP Number: Not reported
Action Taken: Not reported
Contained in Leaking Underground Storage Tank: No

Site Type: 21E
LTBI Listing Date: Not reported
REQ Due: Not reported
Date Deleted: Not reported
Region: Western
EPA Number: Not reported

C13
WNW
1/2-1
5053
Higher

NOVACOR CHEMICALS INC
950 WORCESTER ST
SPRINGFIELD, MA 01151

SHWS

S102082792
N/A

SHWS:

Facility ID: 1-0010793
Site Status: Tier 2 Classification
Current Status: Not reported
Transition Status: Not reported
Site Product: Petroleum
Pub Involvement: Not reported
Initiating Agency: Not reported
Action Taken by: Not reported
REQ Type: Not reported
Date Confirmed: Not reported
Date Listed: Not reported
ERB Number: Not reported
Response Action Submitted: 03/14/1997
Response Action Type: FEND
Response Action: TRANS
Response Action Outcome: Not reported
Activity and Use Limitation: / /
AUL Restriction Type: Not reported
LSP Number: Not reported
Action Taken: Not reported
Contained in Leaking Underground Storage Tank: No

Site Type: 21E
LTBI Listing Date: Not reported
REQ Due: Not reported
Date Deleted: Not reported
Region: Western
EPA Number: Not reported

C14
WNW
1/2-1
5053
Higher

POLYSAR
950 WORCESTER STREET
SPRINGFIELD, MA

MA Spills
SHWS
Release

S101021769
N/A

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

POLYSAR (Continued)

S101021769

SHWS:

Facility ID: 1-0000484
Site Status: No Further Action
Current Status: N.F.A. - These are disposal sites where no further remedial actions are necessary.
Transition Status: DELETED
Site Product: Hazardous
Pub Involvement: Not reported
Initiating Agency: SAB - Information that has been discovered by the Site Assessment Branch of the Bureau of Waste Site Cleanup of the Massachusetts Department of Environmental Protection (DEP).
Action Taken by: Not reported
REQ Type: Not reported
Date Confirmed: 04/15/1989
Date Listed: Not reported
ERB Number: Not reported
Response Action Submitted: Not reported
Response Action Type: Not reported
Response Action: Not reported
Response Action Outcome: Not reported
Activity and Use Limitation: Not reported
AUL Restriction Type: Not reported
LSP Number: Not reported
Action Taken: Not reported
Contained in Leaking Underground Storage Tank: No

Site Type: 21E
LTBI Listing Date: 01/15/1989
REQ Due: Not reported
Date Deleted: 04/15/1989
Region: Western
EPA Number: Not reported

MA RELEASE:

Facility ID: 1-0011692
Facility Status: Not reported
Status Date: Not reported
Phase: Not reported
Notification: 01/29/1997
Category: 120 DY
Official City: SPRINGFIELD
Action:
Date: 07/03/1997
Type: Tier Classification
Status: Tier 2 Classification
Lsp Number: Not reported
Response Action Outcome: Not reported
Activity Use Limitation: Not reported
Action:
Date: 02/04/2000
Type: Phase II
Status: Completion Statement Received
Lsp Number: 6889
Response Action Outcome: Not reported
Activity Use Limitation: Not reported
Chemical Released:
Chemical: FUEL OIL #2
Amount: Not reported
Location Type: Not reported
Source Type: Not reported
ASC Release Tracking Number: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

POLYSAR (Continued)

S101021769

Facility ID: 1-0011693
Facility Status: Not reported
Status Date: Not reported
Phase: Not reported
Notification: 01/29/1997
Category: 120 DY
Official City: SPRINGFIELD
Action:
Date: 07/03/1997
Type: Tier Classification
Status: Tier 2 Classification
Lsp Number: Not reported
Response Action Outcome: Not reported
Activity Use Limitaion: Not reported
Action:
Date: 02/04/2000
Type: Phase II
Status: Completion Statement Received
Lsp Number: 6889
Response Action Outcome: Not reported
Activity Use Limitaion: Not reported
Chemical Released:
Chemical: UNKNOWN CHEMICAL OF UNKNOWN TYPE
Amount: 1.7, micrograms per kilogram
Chemical Released:
Chemical: UNKNOWN CHEMICAL OF UNKNOWN TYPE
Amount: 1.1, micrograms per kilogram
Chemical Released:
Chemical: UNKNOWN CHEMICAL OF UNKNOWN TYPE
Amount: 1.5, micrograms per kilogram
Chemical Released:
Chemical: UNKNOWN CHEMICAL OF UNKNOWN TYPE
Amount: 1.3, micrograms per kilogram
Location Type: Not reported
Source Type: Not reported
ASC Release Tracking Number: Not reported

Facility ID: 1-0011694
Facility Status: Not reported
Status Date: Not reported
Phase: Not reported
Notification: 01/29/1997
Category: 120 DY
Official City: SPRINGFIELD
Action:
Date: 07/03/1997
Type: Tier Classification
Status: Tier 2 Classification
Lsp Number: Not reported
Response Action Outcome: Not reported
Activity Use Limitaion: Not reported
Action:
Date: 02/04/2000
Type: Phase II
Status: Completion Statement Received
Lsp Number: 6889

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

POLYSAR (Continued)

S101021769

Response Action Outcome: Not reported
Activity Use Limitaion: Not reported
Chemical Released:
Chemical: BENZENE, ETHYL-
Amount: 44, micrograms per liter
Location Type: Not reported
Source Type: Not reported
ASC Release Tracking Number: Not reported

MA Spills:

Facility ID:	0000	Spill ID:	W88-0027
Staff Lead:	OTHER	Date Entered:	03/13/1989
Last Entered:	08/28/1992	First Response:	01/21/1988
Spill Date:	01/21/1988	Report Date:	01/21/1988
Spill Time:	04:30AM	Report Time:	06:00AM
Case Closed:	YES	Mat Type:	HAZARDOUS
Virgin Waste:	WASTE	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	STYRENE		
Other Material:	Not reported	PCB Lev (ppm):	Not reported
CAS No:	Not reported	Qty Actual:	NONE GALLONS
Qty Reported:	NONE GALLONS	Other Source:	Not reported
Source:	ABOVE-GRND TANK	Other Incdnt:	Not reported
Incident:	LEAK	Contractor:	NOT USED
Cleanup Type:	Not reported	LUST Elig:	Not reported
Referral:	NO		
Notifier:	Not reported	Notify Date:	Not reported
Notif Tel:	Not reported	Category:	Not reported
Report Prep:	Not reported	Capacity:	Not reported
Days/Close:	-692		
Chemical:	Not reported		
Quantity:	Not reported		

C15
WNW
1/2-1
5053
Higher

NOVA CHEMICALS INC
950 WORCESTER ST
SPRINGFIELD, MA 01151

FINDS 1000442224
RCRIS-LQG MAD981887268
TRIS
RCRIS-TSD
TSCA
CORRACTS
SHWS

CORRACTS Data:

Prioritization: High
Status: RCRA Facility Assessment Completed

RCRIS Corrective Action Summary:

Effective Date: 12/30/1993
Legal Authority: Other, specified by Legal Authority Citation
Effective Date: 03/30/1995
Legal Authority: Other, specified by Legal Authority Citation

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

NOVA CHEMICALS INC (Continued)

1000442224

RCRIS:

Owner: POLYSAR INC RUBBER DIV
(413) 781-1441

Contact: ROBERT EATON
(617) 781-1441

Record Date: 08/20/1991

Classification: Large Quantity Generator, Small Quantity Generator, TSDF

BIENNIAL REPORTS:

Last Biennial Reporting Year: 1997

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	22885.00	D008	335.20
D009	115.00	D018	391.00
D022	391.00	D039	335.20
F002	391.00	F003	391.00

Used Oil Recyc: No

TSDF Activities: Not reported

Violation Status: Violation information exist

There are 6 violation record(s) reported at this site:

Evaluation

Compliance Evaluation Inspection (CEI)
Compliance Evaluation Inspection (CEI)

Non-Financial Record Review
Non-Financial Record Review

Area of Violation

Generator-All Requirements
Generator-All Requirements
Generator-All Requirements
Generator-All Requirements
Generator-All Requirements
Generator-All Requirements

Date of
Compliance

06/15/1995
06/15/1995
06/15/1995
04/29/1988
12/30/1987

FINDS:

Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)

SHWS:

Facility ID: 1-0011692
Site Status: Not reported
Current Status: Not reported
Transition Status: Not reported
Site Product: Not reported
Pub Involvement: Not reported
Initiating Agency: Not reported
Action Taken by: Not reported
REQ Type: Not reported
Date Confirmed: Not reported
Date Listed: Not reported
ERB Number: Not reported
Response Action Submitted: 03/09/1998
Response Action Type: FEND
Response Action: TRANS
Response Action Outcome: Not reported
Activity and Use Limitation: / /
AUL Restriction Type: Not reported
LSP Number: Not reported

Site Type: 21E
LTBI Listing Date: Not reported

REQ Due: Not reported
Date Deleted: Not reported
Region: Western
EPA Number: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

MAP FINDINGS

Database(s)

EDR ID Number
EPA ID Number

NOVA CHEMICALS INC (Continued)

1000442224

Action Taken: Not reported
Contained in Leaking Underground Storage Tank: No

Facility ID: 1-0011693
Site Status: Not reported
Current Status: Not reported
Transition Status: Not reported

Site Product: Not reported
Pub Involvement: Not reported
Initiating Agency: Not reported
Action Taken by: Not reported

REQ Type: Not reported
Date Confirmed: Not reported
Date Listed: Not reported
ERB Number: Not reported

Response Action Submitted: 03/09/1998
Response Action Type: FEND
Response Action: TRANS
Response Action Outcome: Not reported

Activity and Use Limitation: / /
AUL Restriction Type: Not reported
LSP Number: Not reported
Action Taken: Not reported

Contained in Leaking Underground Storage Tank: No

Site Type: 21E
LTBI Listing Date: Not reported

REQ Due: Not reported
Date Deleted: Not reported
Region: Western
EPA Number: Not reported

Facility ID: 1-0011694
Site Status: Not reported
Current Status: Not reported
Transition Status: Not reported

Site Product: Not reported
Pub Involvement: Not reported
Initiating Agency: Not reported
Action Taken by: Not reported

REQ Type: Not reported
Date Confirmed: Not reported
Date Listed: Not reported
ERB Number: Not reported

Response Action Submitted: 03/09/1998
Response Action Type: FEND
Response Action: TRANS
Response Action Outcome: Not reported

Activity and Use Limitation: / /
AUL Restriction Type: Not reported
LSP Number: Not reported
Action Taken: Not reported

Contained in Leaking Underground Storage Tank: No

Site Type: 21E
LTBI Listing Date: Not reported

REQ Due: Not reported
Date Deleted: Not reported
Region: Western
EPA Number: Not reported

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
LUDLOW	S100361552	PARKSIDE CLEANERS	EAST / SEWELL STS.	01056	SHWS	1-0000117
LUDLOW	S100361548	BAYSTATE COLOR & DYE, INC.	RANDALL RD.	01056	SHWS	1-0000637
LUDLOW	S100829058	MMWEC	RANDALL RD.	01056	SHWS	1-0000804
LUDLOW	1000122252	JET LINES INC LUDLOW	TANK FARM RD	01056	FINDS, RORIS-LQG, SHWS	1-0000638
LUDLOW	S100829056	CATAD CHEMICAL	WESTOVER INDUSTRIAL PK.	01056	SHWS	1-0000678
SPRINGFIELD	S100537286	PROPERTY NE MERCY HOSPITAL	CAREW, DEROSIERS, STAFFORD ST		SHWS	1-0000927
SPRINGFIELD	S100363199	CHESTNUT/FRANK B. MURRAY	CHESTNUT / F.B. MURRAY STS.		SHWS	1-0000174
SPRINGFIELD	S100830706	PROPERTY (LOTS 2 & 3)	COTTAGE ST.		SHWS	1-0000445
SPRINGFIELD	S100830698	JOY INDUSTRIES/LOT #6	COTTAGE ST.		SHWS	1-0000515
SPRINGFIELD	S104000254	FORMER PLANT 3	FISK AVE		Release	1-0013027
SPRINGFIELD	91423931	FORMER A&P WAREHSE-297 PLAINFIELD ST	FORMER A&P WAREHSE-297 PLAINFIELD ST		ERNS	
SPRINGFIELD	S101040604	FORMER PRESTIGE AUTO	482 MAIN STREET		MA Spills	0000
SPRINGFIELD	S101041614	FORMER UNITED TECHNOLOGIES	MAIN STREET		MA Spills	0000
SPRINGFIELD	S100830700	MAIN/NOBLE	MAIN STREET		SHWS	1-0000826
SPRINGFIELD	S100831706	UNITED TECH. EAST SITE	MAIN ST.		LUST	1-0000213
SPRINGFIELD	S101697276	UNITED TECH WEST SIDE	MAIN ST		LUST	1-0000214
SPRINGFIELD	S101036332	FORMER DUROCHER'S AUTO BODY	OAKDALE STREET		MA Spills	0000
SPRINGFIELD	S101035385	FORMER COCA-COLA PLANT	33 PLAINFIELD STREET		MA Spills, LUST	1-0000805
SPRINGFIELD	S101035365	COCA-COLA BOTTLING - FORMER	33 PLAINFIELD STREET		MA Spills	1-0805
SPRINGFIELD	S104000199	FORMER SOLID WASTE DISPOSAL AR	STAFFORD / ARMORY STS		Release	1-0012945
SPRINGFIELD	S100043113	INDIAN MOTORCYCLE ASSOC.	STATE ST.		LUST	1-0000180
WILBRAHAM	S101045775	CONRAIL	RTE 20	01095	MA Spills, SHWS	0000
WILBRAHAM	S102403342	AMERICAN LIQUID ASPHALT	2382 OLD BOSTON RD	01095	SHWS	1-0010876

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D008	LEAD
D009	MERCURY
D018	BENZENE
D022	CHLOROFORM
D039	TETRACHLOROETHYLENE
F002	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List

Source: EPA

Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC).

Date of Government Version: 02/04/00

Date Made Active at EDR: 03/15/00

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/07/00

Elapsed ASTM days: 37

Date of Last EDR Contact: 05/09/00

DELISTED NPL: NPL Deletions

Source: EPA

Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 11/08/99

Date Made Active at EDR: 03/15/00

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/07/00

Elapsed ASTM days: 37

Date of Last EDR Contact: 05/09/00

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/14/00

Date Made Active at EDR: 03/15/00

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/02/00

Elapsed ASTM days: 13

Date of Last EDR Contact: 02/28/00

CERCLIS-NFRAP: No Further Remedial Action Planned

Source: EPA

Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 02/14/00

Date Made Active at EDR: 03/15/00

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/02/00

Elapsed ASTM days: 13

Date of Last EDR Contact: 02/28/00

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CORRACTS: Corrective Action Report

Source: EPA

Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/07/99

Date Made Active at EDR: 10/28/99

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 09/13/99

Elapsed ASTM days: 45

Date of Last EDR Contact: 03/13/00

RCRIS: Resource Conservation and Recovery Information System

Source: EPA/NTIS

Telephone: 800-424-9346

Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 12/22/99

Date Made Active at EDR: 03/23/00

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 01/07/00

Elapsed ASTM days: 76

Date of Last EDR Contact: 03/01/00

ERNS: Emergency Response Notification System

Source: EPA/NTIS

Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 01/06/00

Date Made Active at EDR: 02/08/00

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/31/00

Elapsed ASTM days: 8

Date of Last EDR Contact: 05/05/00

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System

Source: EPA/NTIS

Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/97

Database Release Frequency: Biennially

Date of Last EDR Contact: 12/20/99

Date of Next Scheduled EDR Contact: 03/20/00

CONSENT: Superfund (CERCLA) Consent Decrees

Source: EPA Regional Offices

Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A

Database Release Frequency: Varies

Date of Last EDR Contact: N/A

Date of Next Scheduled EDR Contact: N/A

ROD: Records Of Decision

Source: NTIS

Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/31/99

Database Release Frequency: Annually

Date of Last EDR Contact: 04/10/00

Date of Next Scheduled EDR Contact: 07/10/00

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report

Source: EPA

Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/13/99

Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/29/00

Date of Next Scheduled EDR Contact: 07/10/00

HMIRS: Hazardous Materials Information Reporting System

Source: U.S. Department of Transportation

Telephone: 202-366-4526

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/30/99

Database Release Frequency: Annually

Date of Last EDR Contact: 03/15/00

Date of Next Scheduled EDR Contact: 04/24/00

MLTS: Material Licensing Tracking System

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/29/99

Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/10/00

Date of Next Scheduled EDR Contact: 07/10/00

MINES: Mines Master Index File

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959

Date of Government Version: 08/01/98

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 04/03/00

Date of Next Scheduled EDR Contact: 07/03/00

NPL LIENS: Federal Superfund Liens

Source: EPA

Telephone: 205-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91

Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/24/00

Date of Next Scheduled EDR Contact: 05/22/00

PADS: PCB Activity Database System

Source: EPA

Telephone: 202-260-3936

PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/01/99

Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/16/00

Date of Next Scheduled EDR Contact: 05/15/00

RAATS: RCRA Administrative Action Tracking System

Source: EPA

Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95

Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/13/00

Date of Next Scheduled EDR Contact: 06/12/00

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TRIS: Toxic Chemical Release Inventory System

Source: EPA

Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/97

Database Release Frequency: Annually

Date of Last EDR Contact: 03/27/00

Date of Next Scheduled EDR Contact: 06/26/00

TSCA: Toxic Substances Control Act

Source: EPA

Telephone: 202-260-1444

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/94

Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 04/24/00

Date of Next Scheduled EDR Contact: 07/24/00

STATE OF MASSACHUSETTS ASTM STANDARD RECORDS

SHWS: Site Transition List

Source: Department of Environmental Protection

Telephone: 617-292-5990

Contains information about releases that occurred prior to October 1, 1993.

Date of Government Version: 03/20/00

Date Made Active at EDR: 06/23/00

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 05/15/00

Elapsed ASTM days: 39

Date of Last EDR Contact: 02/14/00

LF: Solid Waste Facility Database/Transfer Stations

Source: Department of Environmental Protection

Telephone: 617-292-5989

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 04/04/00

Date Made Active at EDR: 06/23/00

Database Release Frequency: Monthly

Date of Data Arrival at EDR: 05/08/00

Elapsed ASTM days: 46

Date of Last EDR Contact: 05/08/00

LUST: Site Transition List

Source: Department of Environmental Protection

Telephone: 617-292-5990

The Massachusetts List of Confirmed Disposal Sites and Locations To Be Investigated contains an inventory of Leaking Underground Storage Tanks. LUST records have been culled from the List of Confirmed Disposal Sites and Locations To Be Investigated and presented as a separate database.

Date of Government Version: 03/20/00

Date Made Active at EDR: 06/23/00

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 05/15/00

Elapsed ASTM days: 39

Date of Last EDR Contact: 02/14/00

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts

Source: Department of Fire Services, Office of the Public Safety

Telephone: 978-567-3300

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/29/00

Date Made Active at EDR: 03/17/00

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/29/00

Elapsed ASTM days: 17

Date of Last EDR Contact: 02/28/00

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF MASSACHUSETTS ASTM SUPPLEMENTAL RECORDS

AST: Summary Listing of All the Tanks Registered in the State of Massachusetts

Source: Department of Public Safety

Telephone: 617-727-3200

Registered Aboveground Storage Tanks.

Date of Government Version: 02/29/00

Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/28/00

Date of Next Scheduled EDR Contact: 05/15/00

MA SPILLS: Historical Spill List

Source: Department of Environmental Protection

Telephone: 617-292-5720

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/93

Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/29/94

Date of Next Scheduled EDR Contact: N/A

RELEASE: Reportable Releases

Source: Department of Environmental Protection

Telephone: 617-292-5990

Contains information about notifications received after October 1, 1993.

Date of Government Version: 03/20/00

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/14/00

Date of Next Scheduled EDR Contact: 05/15/00

EDR PROPRIETARY DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

HISTORICAL AND OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in March 1997 from the U.S. Fish and Wildlife Service.

GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

FORMER CHAPMAN VALVE
225 GOODWIN STREET
SPRINGFIELD, MA 01151

TARGET PROPERTY COORDINATES

Latitude (North):	42.153099 - 42° 9' 11.2"
Longitude (West):	72.498901 - 72° 29' 56.0"
Universal Transverse Mercator:	Zone 18
UTM X (Meters):	706650.2
UTM Y (Meters):	4669589.0

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property: 2442072-B4 LUDLOW, MA
Source: USGS 7.5 min quad index

GENERAL TOPOGRAPHIC GRADIENT AT TARGET PROPERTY

Target Property: Undeterminable

Source: General Topographic Gradient has been determined from the USGS 1 Degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County
HAMPDEN, MA

FEMA Q3 Flood
Data Electronic Coverage
YES

Flood Plain Panel at Target Property:
Additional Panels in search area:

2501500003B / CBPP
2501540005D / CBPP
2501440009C / CBPP
2501440011C / CBPP

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property
LUDLOW

NWI Electronic
Coverage
YES

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

AQUIFLOW™

Search Radius: 2.000 Miles.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/8 - 1/4 Mile West	NNW
8	1/2 - 1 Mile WSW	NW
9	1 - 2 Miles NE	W
B10	1 - 2 Miles ENE	S
B11	1 - 2 Miles ENE	VARIES

For additional site information, refer to Physical Setting Source Map Findings.

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Geologic Code: Tr
Era: Mesozoic
System: Triassic
Series: Triassic

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

Soil Layer Information						
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)
	Upper	Lower		AASHTO Group	Unified Soil	
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam
silt loam
very fine sandy loam

Surficial Soil Types: fine sandy loam
silt loam
very fine sandy loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: fine sandy loam
channery - silt loam
gravelly - loamy sand
silt loam
loamy fine sand
stratified
gravelly - sandy loam

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A3	420957072295501	1/2 - 1 Mile North
A4	420957072295301	1/2 - 1 Mile North
5	420928072285401	1/2 - 1 Mile ENE
6	420950072303701	1/2 - 1 Mile NW
7	420951072291501	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

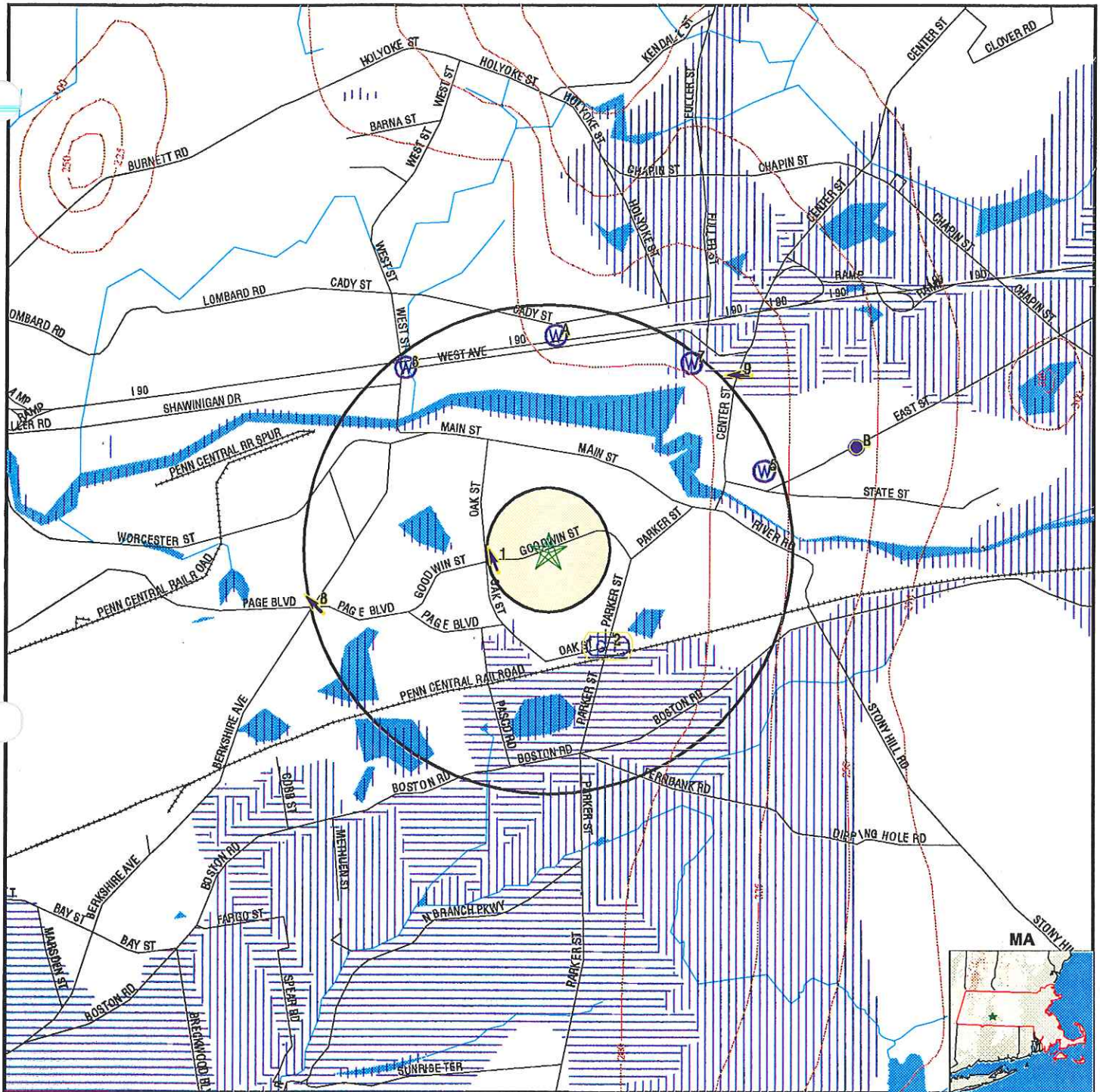
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 511704.1s



- Major Roads
- Contour Lines
- Water Wells
- Public Water Supply Wells
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Cluster of Multiple Icons
- Earthquake epicenter, Richter 5 or greater
- EPA Designated Sole Source Aquifers
- Potentially Productive Aquifers
- Not Potentially Productive Aquifers
- DEP Approved Zone IIs

TARGET PROPERTY: Former Chapman Valve
ADDRESS: 225 Goodwin Street
CITY/STATE/ZIP: Springfield MA 01151
LAT/LONG: 42.1531 / 72.4989

CUSTOMER: O'Reilly, Talbot & Okun
CONTACT: Michael Talbot
INQUIRY #: 511704.1s
DATE: June 27, 2000 2:07 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1 West 1/8 - 1/4 Mile Higher	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Date:	1-0000170 NNW 3.59 8 1/24/1991	AQUIFLOW	2447
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2 SSE 1/4 - 1/2 Mile Higher	Site ID: Groundwater Flow: Shallowest Water Table Depth: Deepest Water Table Depth: Date:	1-0000211 Not Reported 15 20 1/1987	AQUIFLOW	2458
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A3 North 1/2 - 1 Mile Higher		FED USGS	420957072295501
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BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1965	County:	Hampden
Altitude:	235.00 ft.	State:	Massachusetts
Well Depth:	230.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	100.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05081965	Prim. Use of Water:	Domestic

A4 North 1/2 - 1 Mile Higher		FED USGS	420957072295301
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BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1966	County:	Hampden
Altitude:	240.00 ft.	State:	Massachusetts
Well Depth:	397.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	110.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	06221966	Prim. Use of Water:	Domestic

5 ENE 1/2 - 1 Mile Higher		FED USGS	420928072285401
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BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1975	County:	Hampden
Altitude:	230.00 ft.	State:	Massachusetts
Well Depth:	222.00 ft.	Topographic Setting:	Flat surface
Depth to Water Table:	19.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08291975	Prim. Use of Water:	Institution

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

6
NW
1/2 - 1 Mile
Higher

FED USGS 420950072303701

BASIC WELL DATA

Site Type:	Test hole, not completed as a well		
Year Constructed:	1952	County:	Hampden
Altitude:	206.00 ft.	State:	Massachusetts
Well Depth:	Not Reported	Topographic Setting:	Alluvial or marine terrace
Depth to Water Table:	2.00 ft.	Prim. Use of Site:	Destroyed
Date Measured:	01011952	Prim. Use of Water:	Unused

7
NE
1/2 - 1 Mile
Higher

FED USGS 420951072291501

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1956	County:	Hampden
Altitude:	241.00 ft.	State:	Massachusetts
Well Depth:	160.00 ft.	Topographic Setting:	Flat surface
Depth to Water Table:	80.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05141956	Prim. Use of Water:	Domestic

8
WSW
1/2 - 1 Mile
Higher

Site ID: 1-0000194
Groundwater Flow: NW
Shallowest Water Table Depth: 30
Deepest Water Table Depth: 35
Date: 8/16/1994

AQUIFLOW 2440

9
NE
1 - 2 Miles
Higher

Site ID: 1-0000116
Groundwater Flow: W
Shallowest Water Table Depth: 16.93
Deepest Water Table Depth: 26.75
Date: 1/25/1994

AQUIFLOW 2423

B10
ENE
1 - 2 Miles
Higher

Site ID: 1-0000597
Groundwater Flow: S
Shallowest Water Table Depth: 14.44
Deepest Water Table Depth: 16.30
Date: 3/21/1991

AQUIFLOW 2424

B11
ENE
1 - 2 Miles
Higher

Site ID: 1-0000361
Groundwater Flow: VARIES
Shallowest Water Table Depth: 11
Deepest Water Table Depth: 15
Date: 3/1997

AQUIFLOW 2426

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for HAMPDEN County: 2

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level \geq 2 pCi/L and \leq 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Zip Code: 01151

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.900 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in March 1997 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOWTM Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the national Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers

Source: Executive Office of Environmental Affairs

Community Public Water Supplies Datalayer: Data was compiled by the DEP Division of Water Supply and contains 1435 public community water supplies as defined in 310 CMR 22.00. Both groundwater and surface water supplies are included. As stated in 310 CMR 22.00, a Community Water Supply is part of a community water system "which serves at least fifteen (15) service connections used by year-round residents".

Areas of Critical Environmental Concern Datalayer: The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers Datalayer: The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by a EPA hydrogeologist.

Aquifers Datalayer: MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

DEP Approved Zone IIs Datalayer: The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is "that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary)." These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.

- Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line.
- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.
- Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

RADON

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration





CORPORATE ENVIRONMENTAL ADVISORS, INC.

MA

DATE

3/3/89

REC'D. BY

Reg F

PRIVILEGED & CONFIDENTIAL INFORMATION

TECHNICAL REPORT

Prepared For

Mr. Stephen P. Gray
American Dream Modular Homes, Inc.
225 Goodwin Street
Springfield, MA

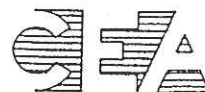
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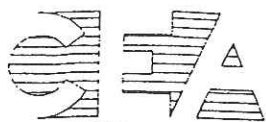
CORPORATE ENVIRONMENTAL ADVISORS, INCORPORATED
453 Center Street
Ludlow, MA 01056

Date: February 9, 1989

Site: 225 Goodwin Street
Indian Orchard, MA

CEA Ref. File #1769-88-1014





CORPORATE ENVIRONMENTAL ADVISORS, INC.

P. ALICANDRO
President

STEVEN M. MIGRIDICHIAN
Vice President

- Groundwater/Subsurface Investigations
- Drilling, Sampling & Monitoring
- Pollution Prevention, & Remediation
- Asbestos and Environmental Laboratory
- Hazardous Materials/Waste Management
- Seminar and Training Development
- Industrial Regulatory Compliance

February 9, 1989

Mr. Stephen P. Gray
American Dream Modular Homes, Inc.
225 Goodwin Street
Springfield, MA

RE: M.G.L. Chapter 21 E Environmental
Assessment Report
226 Goodwin Street, Springfield, MA
CEA Ref. File #1769-88-1014

Dear Mr. Gray:

This report presents findings of a Site Investigation and Assessment conducted for the above-referenced site.

The purpose of this investigation was to assess the environmental condition of the subject property relative to the release of hazardous materials or oil pursuant to "The Massachusetts Oil and Hazardous Materials Release Prevention and Response Act of 1983" (M.G.L., c21E).

Site visits and record reviews were conducted between October 14, 1988 and February 9, 1989. The active period for the open file investigation closed on February 9, 1989 (Corporate Environmental Advisors, Inc. File #1769-88-1014. Hence, findings reflect significant conditions known in the field and on record during this investigation period.

Findings and results of the review were assessed on the basis of interrelationships with other environmental statutes and regulations dealing with the use, storage, accumulation and disposal of regulated substances for purposes of providing a comprehensive technical report for all parties involved in this site assessment. Findings, technical data or related documents are considered PRIVILEGED AND CONFIDENTIAL INFORMATION unless authorized by you or your representative.

Sincerely,

CORPORATE ENVIRONMENTAL ADVISORS, INC.

Complete Geotechnical & Environmental Services
453 CENTER STREET, LUDLOW, MASSACHUSETTS 01056 (413) 589-0548
Central and Eastern Massachusetts (508)754-1080
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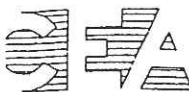
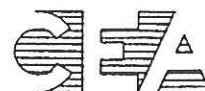


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FIGURE 1:	SITE LOCUS
FIGURE 2:	SITE LAYOUT
FIGURE 3:	GROUNDWATER CONTOURS & FLOW DIRECTION

Attachment I:	Boring/Well Logs
Attachment II:	Observation Well Gauge Reports
Attachment III:	Laboratory Analyses & Chain of Custody Forms





SECTION 1.0 INTRODUCTION

1.1 Site Geography

1.1.1 Site

The subject property (known as American Dream Modular Homes, Inc.) is situated in the northeastern portion of the City of Springfield, Massachusetts, in the Indian Orchard section of the city. The property is specifically addressed as 225 Goodwin Street and is located approximately 1000 feet east of the intersection of Oak Street and Goodwin Street. Figure 1 locates the subject site on the Springfield North, Mass. Topographic Quadrangle (U.S. Geological Survey, 1972) and the Ludlow, Mass. Topographic Quadrangle (U.S.G.S., 1969).

1.1.2 Site Layout and Surrounding Land Uses

The subject property is a rectangular parcel covering 11.9 acres in an area with Industrial A (I-A) zoning. The property has approximately 608 feet of frontage along the south side of Goodwin Street. The site is bordered by the following: on the north across Goodwin Street by the former Crane Company facility; on the east by Truss Engineering Corporation; on the





south by unimproved land; and on the west by residential property. Figure 2 provides a layout of the property based on City of Springfield Assessors Plan 0980, an undated Chapman Valve Company plan and CEA, Inc., field sketches.

1.2 Site History

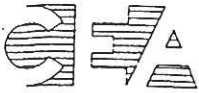
1.2.1 Historical Usage

The property has been owned by Stephen P. Gray of 86 Bowdoin Street, Springfield, Massachusetts since 2 May 1985 and has been the site of American Dream Modular Homes, Inc. (ADMH) since that date. The property had been owned by Oak Hill Industries since 29 April 1983, having been purchased from the Crane Company. The Chapman Valve Manufacturing Company, which had constructed the building circa 1940, had been purchased by Crane ca. 1950. Chapman Valve and Crane had both used the property as a foundry; ADMH used the site for the manufacture of modular houses.

1.2.2 Storage Tank History

Springfield City Clerk Department records listed the first documented underground storage of hazardous materials





(heating oil) on the property as being in 1949 while owned by Chapman Valve Manufacturing Company. In 1950, tankage was listed as 36,000 gallons aboveground and 144,000 gallons underground. The license was revoked in 1981, according to City Clerk records. According to the aforementioned undated Chapman Valve plan, eight (8), or possibly ten (10), underground storage tanks in concrete wells were located off the northwest corner of the building. In 1988, ADMH officials stated that the tanks were not in use, and had not been officially decommissioned. Springfield Fire Department Fire Prevention records contained no references to any historic storage on the property, nor were any permits on file for tank removal or decommissioning.

1.2.3 Transformer Removal

In August of 1986, seven (7) G.E. Pyranol Poly-chlorinated Bipheynol (PCB) transformers and ninety-two (92) 25-pound PCB capacitors were removed from the subject site per DEQE and EPA hazardous waste regulations by Three-C Electrical Testing Company of Ashland, Massachusetts. Two (2) remaining non-PCB transformers were not removed at that time.





1.3 Environmental Review

1.3.1 Topography and Vegetation

The subject property exists as a sloping surface at an elevation of 200+ to 220+ feet above mean sea level (National Geodetic Vertical Datum of 1929) on glacial outwash deposits. The land surface slopes from the southeast down to the northwest toward Goodwin Street and the Chicopee River. No natural climatic climax vegetation exists on the subject property due to the nature of its usage. Successional grasses and shrubs occupy areas adjacent to the Truss Engineering property on the east and along the fence in the rear (south).

1.3.2 Soils and Groundwater

Soils of the area of the subject property generally consist of water-sorted glacial outwash materials of the Hinckley-Wethersfield-Windsor association (U.S.D.A., et al; 1978b). The soil series in the area of the subject site have been identified as Urban Land (Ub), the Urban land-Hinckley-Windsor association (UK) and the Hinckley loamy sand (HgB) by the Soil Conservation Service (U.S.D.A., et al; 1978a). The majority of the subject site is covered by Urban Land (Ub)





soils. These soils have been so disturbed by human sequent occupance that precise soil series identification by the S.C.S. is impossible. Soils of the Urban Land-Hinckley-Windsor association (UK), however, are found adjacent to the east and west of the subject site. The Hinckley loamy sands (HgB) occupy the extreme southwest corner of the subject site and the adjacent property to the south. The UK soils are found on glacial outwash terraces and are deep and excessively drained. The Hinckley soils are described as sandy-skeletal, mixed, mesic Typic Udorthents with very rapid permeability and very low available water capacity. The Windsor soils are described as mixed, mesic Typic Udipsamments with rapid to very rapid permeability and low available water capacity.

Topographic data and previous DEQE mandated geotechnical investigations in the area (DEQE site number 1-0170) indicated that groundwater may be found approximately twelve (12) to twenty (20) feet below the surface and flowing, generally, to the northwest or northwest toward the Chicopee River.

1.3.3 Surface Water and Wetlands

No surface water or wetlands exist on or within one hundred (100) feet of the subject property.





1.3.4 Water Supply

Potable water is supplied to the site by the City of Springfield Water Department. The source of the water is the system of reservoirs located in the region that are maintained by the Springfield Regional Water Supply System (L.P.V.R.P.C.; 1983).

1.3.5 Environmental Records Review

Interviews and records reviews were conducted pertaining to the environmental condition of the property. Officials in the Health Department stated that there are no currently known hazardous waste problems associated with the property. A review of Fire Department and City Clerk records (see Section 1.2.2) indicated that storage permits and licenses were revoked in 1981, and that no storage tank removal permits were obtained for the property.

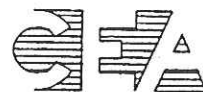
A review of records pertaining to hazardous materials released in the neighborhood of the subject property was conducted at the Western Region Office (WRO-Springfield) of the Massachusetts Department of Environmental Quality Engineering (DEQE). No reports of any incidents specifically relating to





the subject property were noted in DEQE Division of Hazardous Waste files. The former Crane Company landfill (south and southwest of the subject site) and the Crane Company main facility across Goodwin Street, however, were listed DEQE files, and the main facility was also listed in the current (15 January 1989) "List of Confirmed Disposal Sites and Locations to be Investigated" publication.

The landfill was cited for improper closure, but a site assessment (ERT Document #2020-001-0500, Sept. 1988) found no significant environmental problems associated with the property. The Crane Company facility, however, was found to have petroleum hydrocarbon contamination (ERT Document #2020-001-500-1, October 1988 and DEQE Site Assessment File #1-0170) and "...paint and waste oil releases..." according to DEQE Environmental Engineer Richard Green. Green also stated that there was known oil contamination along the railroad tracks on the east side of the former Crane Company foundry (i.e. the subject site). The ERT documents and Green all indicated that groundwater flow in the immediate area of the subject property was to the northwest or north-northwest.





SECTION 2.0 FIELD INVESTIGATIONS AND LABORATORY ANALYSES FOR HAZARDOUS MATERIALS AND OIL

2.1 Site Inspections

2.1.1 Building Inspection

The 127,000 square foot ADMH building was used for the construction/assembly of modular houses, for the storage of building materials and supplies, and as office space. In addition to wood, windows, doors, tools, and other building materials, the following were noted:

- (a) propane, acetylene and oxygen tanks;
- (b) one (1) empty 275-gallon aboveground storage tank;
- (c) paints, lacquers, thinners, solvents, oils, B-resin urethane;
- (d) one (1) 55-gallon drum - contents unknown;
- (e) four (4) forklifts;
- (f) scrap metal;
- (g) unquantified suspected asbestos containing material (ACM) on piping.





2.1.2 Yard Inspection

A survey (January 1989) of the yard surrounding the building revealed the following (see also Figure 2):

- (a) metal scrap to south of building;
- (b) three (3) 55-gallon drums labeled "old oil" near scale house;
- (c) five (5) abandoned trucks along fence off southeast corner of building;
- (d) approximately eight (8) 55-gallon drums of apparent trash and debris off southeast corner of building;
- (e) scrap metal, machinery, soil staining (oil?) near remaining transformer (Transformer "A") on south side of building;
- (f) abandoned transformer near southeast corner of property; (Transformer "B" on Figure 2);
- (g) soil staining (oil?) along railroad tracks on east side of building;
- (h) two (2) vent pipes and one (1) fill pipe off northwest corner of building;
- (i) underground storage area off northwest corner of building;
- (j) one (1) 55-gallon drum labeled diesel fuel located outside of bay on south side of building.



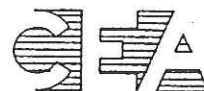


2.2 Field and Laboratory Methodologies and Analyses

2.2.1 Sample Points

In consideration of property layout, surrounding land usage, site logistics, site history, underground storage tank locations, groundwater flow direction and geological and geographical data and characteristics, seven (7) sample point stations (CEA-1 through CEA-7) as soil borings/monitoring wells and four (4) sample point stations (CEA-5S, CEA-6S, CEA-7S, and CEA-7 Tracks) as shallow soil probes were placed in strategic locations. Figure 2 identifies the locations of the sample point stations for the subject site.

The soil borings (CEA-1 through CEA-7) were advanced by hollow stem augers driven by a truck-mounted hydraulic rig on November 8, November 9, and December 1, 1988. Soil samples were collected at five (5) foot intervals from the surface to the end of the borings during drilling using the split spoon sampling per ASTM Standard D-1586 (Standard Penetration Test). The monitoring wells were assembled of threaded flush joint piping constructed of polyvinyl chloride (PVC) per ASTM Schedule 40. The casings and monitoring screens (0.010 inch slot) were of two (2) inch inside diameter (ID) with the screens set at least five



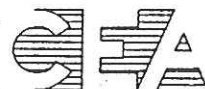


(5) feet into water table (as determined during drilling and as measured from existing grades) or at the point of auger refusal. Filter sand packs were placed in the annular space between the sidewalls of the borings and the monitoring screens. Cement slurry aprons were placed at the surface to prevent the infiltration of extraneous substances into the groundwater which would otherwise invalidate the laboratory analytical results. All wells in high traffic areas were capped with roadboxes and were cemented in place as needed. Upon completion of each well, a large capacity bailer was used to develop the wells and rid the well screens of any fine grained sand or silt, ensuring representative groundwater in the wells for later purging and sample withdrawal. Complete Boring/Well Log information is contained in Attachment I.

The shallow soil probes were hand dug in several areas (see Figure 2) in the southern and eastern areas of the property near observed metal scrap locations, former transformer locations and observed surface staining.

2.2.2 Soil and Groundwater Sampling

(a) The split-spoon soil samples were collected in clean teflon-sealed wide mouth glass containers during drilling for





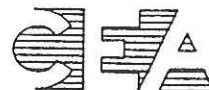
headspace analysis by photoionization detection (PID) to determine the presence of volatile organic compound contamination.

(b) Groundwater samples were collected using a peristaltic pump in clean 40-ml. glass containers with teflon septa screw caps. Sampling documentation was recorded on appropriate Chain-of-Custody forms (Attachment II).

(c) Shallow soil samples were collected with clean, decontaminated hand tools and placed in clean, teflon-sealed wide mouth glass containers for laboratory analysis.

2.2.3 Screening and Analytical Methodology

(a) The split spoon soil samples were screened and analyzed for any contamination by a photoionization Trace Gas Analyzer (HNU P-101; 11.7 eV lamp) using the principle of photoionization detection (PID). The PID was used to screen for volatile organic compound vapors at a Minimum Detection Limit (MDL) of 1.0 parts per million (ppm). Complete soil strata descriptions are contained in the FIELD CLASSIFICATION AND REMARKS column in the Boring/Well Logs in Attachment I.





(b) The groundwater samples were screened/analyzed for any potential contamination by the following analytical laboratory methods:

1. U.S. EPA Method 3810 was used to screen samples from selected monitoring wells to determine the concentration of various Volatile Organic Compounds at MDL in ppb (or ug/l);

2. U.S. EPA Method 608 was used to analyze the sample from CEA-6 for PCBs in ppb;

3. Groundwater samples from selected wells were analyzed for Petroleum Hydrocarbon content by the Infrared Method at MDL in ppm;

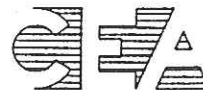
4. U.S. EPA Method 625 was used to analyze samples from selected monitoring wells to determine the concentration of various Semi-Volatile Organic Compounds at MDL in ppb;

5. Samples from all wells were analyzed for pH and Ion Conductivity.

(c) The shallow soil samples were analyzed for any contamination by the following:

1. U.S. EPA Method 8240 was used to analyze selected samples for Volatile Organic Compounds at a MDL in ppb;

2. One (1) soil sample (CEA-6S) was analyzed for Trace Metals (EP Tox) in ppm;





3. U.S. EPA Method 608 was used to analyze the samples for PCB contamination;

4. U.S. EPA Method 610 was used to analyze selected samples for Polynuclear Aromatic Hydrocarbons at a MDL in ppb.

Groundwater was encountered at approximately seventeen (17) to twenty-one (21) feet below surface grade at the time of installation of the monitoring wells. Subsequent (7 December 1988) gauging and sampling of the wells (Attachment I) indicated static groundwater elevations of 91.35 to 84.92 feet based upon an assumed benchmark (fire hydrant) elevation of 100 feet.

Groundwater flow was interpreted to be to the northwest (Figure 3) based on the above data. Chain-of-Custody forms were completed, sampling equipment decontaminated, and applicable field sampling protocols (including instrument calibration and sample collection standardization) were performed in accordance with U.S. EPA Publication SW-846 and CEA, Inc. Standard Operating Procedures for achieving quality assurance/quality control standards.

2.2.4 Screening and Analytical Results

(a) Volatile Screening Results

Headspace screening of the subsoil split-spoon samples





with direct reading photoionization detector (PID) instrumentation revealed the following detection of the presence of volatile organic compounds at MDL in parts per million (ppm) concentration:

TABLE 1

HEADSPACE ANALYSIS

SAMPLE	CEA-1	CEA-2	CEA-3	CEA-4	CEA-5	CEA-6	CEA-7
S-1	<1	<1	<1	<1	<1	<1	<1
S-2	<1	<1	<1	<1	<1	<1	<1
S-3	<1	<1	<1	<1	<1	<1	<1
S-4	<1	<1	<1	<1	>1	<1	<1
S-5	<1	<1	<1	NS	>1	58	NS

Source: Column A in Boring/Well Logs in Attachment I; all data gathered by CEA, Inc. personnel.

(b) Groundwater Analytical Results

1. Analysis of selected groundwater samples via USEPA Method 3810 (volatile organic compounds) revealed the following at MDL in ppb:



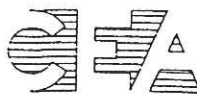


TABLE 2

U.S. EPA METHOD 3810 -- VOLATILE ORGANIC COMPOUNDS

COMPOUND	CEA-1	CEA-4	CEA-5	CEA-6	CEA-7
1,1,1 Trichloroethane	ND	ND	385	9	ND
Ethyl Benzene	ND	ND	ND	87	ND
1,3 Dichlorobenzene	ND	ND	ND	5	ND
1,2 Dichlorobenzene	ND	ND	ND	9	ND
1,4 Dichlorobenzene	ND	ND	ND	5	ND
Xylene	ND	ND	ND	186	ND

Source: Laboratory analytical reports in Attachment II.

2. Analysis of a selected sample (CEA-6) via U.S. EPA Method 608 revealed no detection of the presence of any pesticides or PCBs at MDL in ppb (ug/l). Results are also contained in Attachment II.

3. Analysis of selected samples for Petroleum Hydrocarbon Content by Infrared Detection revealed the following at MDL in ppm:

TABLE 3

PETROLEUM HYDROCARBON CONTENT

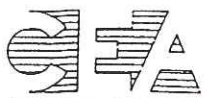
SAMPLE POINT	CONCENTRATION
CEA-2	0.1
CEA-3	<0.1
CEA-4	0.4
CEA-6	1240.0

Source: Laboratory analytical reports in Attachment II.

Soils
←

ppb





4. U.S. EPA Method 625 analysis of selected samples for Semi-Volatile Organics revealed no detection of any compounds at MDL in ppb. Complete results are contained in Attachment II.

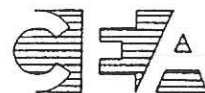
5. Ion Conductivity and pH analyses were also performed on samples from all sample points. The pH values were slightly acidic (between 6.32 and 6.89) for five (5) of the sample points and slightly alkaline (7.30 and 7.70) for two (2) of the sample points. Ion Conductivity varied from 333 to 459 micromhos, consistent with normal values obtained from other industrial sites in the region. Complete laboratory reports are contained in Attachment II.

(c) Shallow Soil Sample Analytical Results

1. USEPA Method 8240 analysis of selected samples revealed no detection of the presence of any volatile organic compounds at MDL in ppb. Complete results are contained in Attachment II.

2. Analysis of a selected sample (CEA-6S) for Trace Metals (EP Tox) revealed concentrations that are consistent with or less than common concentrations in soils (ref: EPA SW-874).

3. USEPA Method 608 analysis of selected samples revealed the following at MDL in ppb:



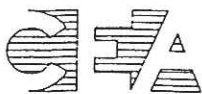


TABLE 4

ORGANOCHLORINE PESTICIDES AND POLYCHLORINATED BIPHENYLS

COMPOUND	CEA-5S	CEA-6S	CEA-7S	CEA-7 (TRACKS)
PCB-1016	ND	155,800	ND	ND
PCB-1260	584.5	ND	ND	321.1

PPB

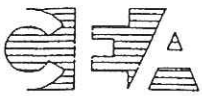
Source: Laboratory analytical report in Attachment II.

4. U.S. EPA Method 610 analysis of selected samples revealed elevated concentrations of several Polynuclear Aromatic Hydrocarbon (PAH) compounds in each sample point. Compounds detected and concentration levels are contained in the laboratory analytical report in Attachment II.

SECTION 3.0 SUMMARY AND CONCLUSIONS

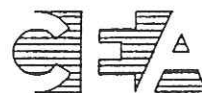
3.1 The subject property consists of an 11.9 acre parcel of land containing a 127,000 square foot building that has been used as a foundry (ca. 1940 to ca. 1985) and as a modular house construction site since 1985. The property is specifically located at 225 Goodwin Street, in the northeastern portion of the Indian Orchard section of the City of Springfield, Massachusetts. The property is currently owned by Stephen P. Gray, 86 Bowdoin Street, Springfield, Massachusetts.

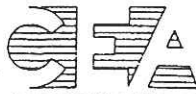




3.2 From October 1988 to January 1989, CEA, Inc., performed environmental site inspections, installed seven (7) soil borings and seven (7) monitoring wells, gathered representative soil and groundwater samples, performed laboratory analyses, and conducted city and state environmental file and record reviews regarding the subject site.

3.3 Splitspoon subsoil and groundwater samples were collected in the areas of the underground storage tanks, transformer locations, scrap metal debris locations, and railroad tracks. Concentrations of several compounds (Ethyl Benzene, Xylene, Dichlorobenzene, 1,1,1 Trichloroethane) were detected in the groundwater near CEA-5 and CEA-6. Trace levels of Petroleum Hydrocarbons were detected near the underground storage tank area; an elevated concentration was detected in CEA-6 on the south side of the building. No Polychlorinated Biphenyls or Semi-Volatile Organic compounds were detected in the groundwater. Headspace screening of the splitspoon subsoil samples revealed no detection of any volatile organics, except for 58 ppm in S-5 (19' - 20.5') of CEA-6 at the capillary fringe of groundwater.





3.4 Shallow soil samples were gathered in the area of the scrap metal piles, the remaining transformer, and along the tracks on the east side of the building. Laboratory analysis of the samples revealed the presence of elevated concentrations of Polychlorinated Biphenyls [CEA-5S (584.5 ppb), CEA-6S (155,800 ppb) and CEA-7 TRACKS (321.1 ppb)] and Polynuclear Aromatic Hydrocarbons [CEA-7S and CEA-7 TRACKS]. Uncommon levels of Trace Metals were not detected in the sample point (CEA-6S) chosen.

3.5 The presence of the detected compounds requires that a release notification be made by the owner/operator of the subject property to the Massachusetts Department of Environmental Quality Engineering (DEQE) Western Regional Office (Springfield, MA) in accordance with M.G.L. Chapter 21E, Section 7 and the Massachusetts Contingency Plan "the MCP" (Regulation 310 CMR 40.370). Pursuant to the MCP Regulation 310 40.543, this report is classified as a "Phase I-Limited Site Investigation."

3.6 Underground storage tanks which are out-of-service are considered abandoned under Massachusetts Fire Prevention Regulation 527 CMR (MFPR) 9.02, if the tanks have not been used in excess of six (6) months (for licensed facilities) or twenty-

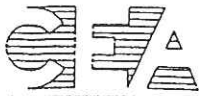




four (24) months (for other facilities). Given that the tanks have not been active for at least one (1) year, the tanks may be considered abandoned according to regulations and MFPR 527 CMR 9.21(2), if not reactivated as part of the heating system. If abandoned for an alternative heating system, the regulations require that the owner must immediately obtain a permit from local fire officials pursuant to M.G.L., c.148, s.38a, and "...subject to the directions of the head of the local fire department, shall have any product removed from the tank(s), all tank openings properly secured, and the tank(s) removed from the ground..." The product and the tank(s) shall be disposed of in accordance with 310 CMR 30.00 (Hazardous Waste Regulations) and Massachusetts Fire Marshall Regulation (MFMR) 502 CMR 3.00 "...at the owner's expense, as directed by the head of the local fire department."

3.7 An unquantified amount of suspected asbestos containing material (ACM) was observed on piping in the foundry/construction portion of the building. Portions of the suspected ACM appeared to be in a deteriorated (friable) condition.





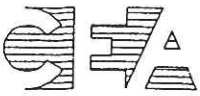
3.8 Small quantities of discarded commercial chemical products such as oil, solvents and other hazardous materials/wastes were observed in various containers within the building and its surrounding environs. The generation, accumulation, and storage of hazardous wastes are regulated activities in accordance with DEQE Regulation 310 CMR 30.000 (Hazardous Waste Management). On-site accumulation in tanks and containers is subject to requirements outlined in 310 CMR 30.340 (1)(a) and (b).

SECTION 4.0 RECOMMENDATIONS

4.1 CEA, Inc. recommends that a copy of this report be submitted to the Massachusetts DEQE for review and comment, pursuant to M.G.L. Chapter 21E Section 7 and DEQE MCP Regulation 310 CMR 40.370 as a release notification. Upon review, a Notice of Responsibility (NOR), pursuant to regulatory requirements of M.G.L., C21E, will be issued to the owner/operator.

4.2 If it is determined that the aforementioned asbestos-containing material (ACM) is to be removed and/or repaired, it is recommended that proper work practices and procedures be used for any abatement procedure. Asbestos





abatement activities are regulated procedures (Asbestos is regulated as an air pollutant) and require specially trained and skilled personnel with special protective equipment and tools in accordance with U.S. EPA 40 CFR 61, OSHA 29 CFR 1910.1001 and Massachusetts DEQE regulations. Prior to commencement of abatement activities, however, a survey by a qualified inspector to evaluate the extent and condition of ACT is recommended.

4.3 The detected concentrations of PCB compounds pose no apparent threat to groundwater quality at this time, based on groundwater quality data from CEA-6, experience in similar circumstances of PCB-contaminated soil, and the limited/non-existent groundwater users in the local area. CEA, Inc. recommends that known areas of surface-exposed contaminated soil be excavated, contained and removed prior to any site modifications as a short-term measure requiring approval in accordance with the MCP Regulation 310 CMR 40.542.

4.4 CEA, Inc. also recommends that a more extensive "Phase II - Site Assessment" pursuant to Regulation 310 CMR 40.545 for the subject property be conducted to delineate the extent of the observed groundwater contamination at monitoring well CEA-6, and, if possible, the source of the detected compounds. Additionally, groundwater testing for PCB compounds





should be expanded beyond the limited scope of this investigation. Investigations to determine the horizontal and vertical extent of soil contamination from PCB compounds, metals and Polynuclear Aromatic Hydrocarbons should also be expanded. The removal of existing metal scrap and demolition debris on the subject site would facilitate such an expanded analytical program for areas that were not accessible during this investigation.

4.5 Based on the age of the underground fuel oil storage tanks, a certain degree of potential risk may exist regarding the structural integrity of the system. Given potential risks of the underground structure, CEA, Inc. recommends periodic tank testing and inspection including external monitoring of groundwater as part of ongoing cost-effective management strategies to monitor for and respond to releases.

4.6 If the current operations, or similar activities, are to be maintained, CEA, Inc. recommends that the handling, storage, and disposal of any generated waste products, if not already so done, be updated and brought into compliance with the above referenced current environmental regulations (310 CMR





30.00 and applicable DEQE regulations), including the use of licensed hazardous waste transporters and proper manifesting of all transported quantities.





CORPORATE ENVIRONMENTAL ADVISORS, INC.

CERTIFICATION STATEMENT

It is hereby certified that the methodologies, techniques and findings of this technical report have been conducted in accordance with relevant environmental regulations, applicable professional standards and prudent engineering practices and that the information, attached documents and data are true, accurate and complete to the best of our knowledge.

CORPORATE ENVIRONMENTAL ADVISORS, INC.
453 Center Street
Ludlow, Massachusetts 01056
(413) 589-0548

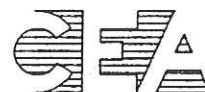
Gary P. Alicandro
President
Certified Hazardous Materials
Engineer

Steven M. Migridichian
Vice President
Principal Hydrogeologist

Date: February 9, 1989

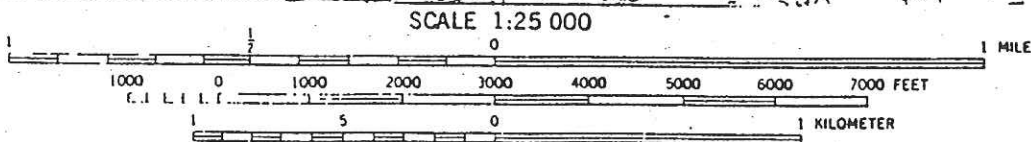
Property: 225 Goodwin Street
Indian Orchard, MA

CEA Ref. File #1769-88-1014





CORPORATE ENVIRONMENTAL ADVISORS, INC.



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

FIGURE 1

SITE LOCUS

SPRINGFIELD NORTH, MASS.
N4207.5—W7230/7.5

1972
PHOTOREVISED 1979
AMB 6468 II NE—SERIES V814

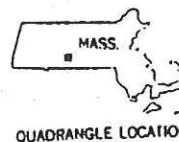
LUDLOW, MASS.
N4207.5—W7222.5/7.5

1969

AMS 6568 III NW—SERIES V814



QUADRANGLE LOCATION



QUADRANGLE LOCATION



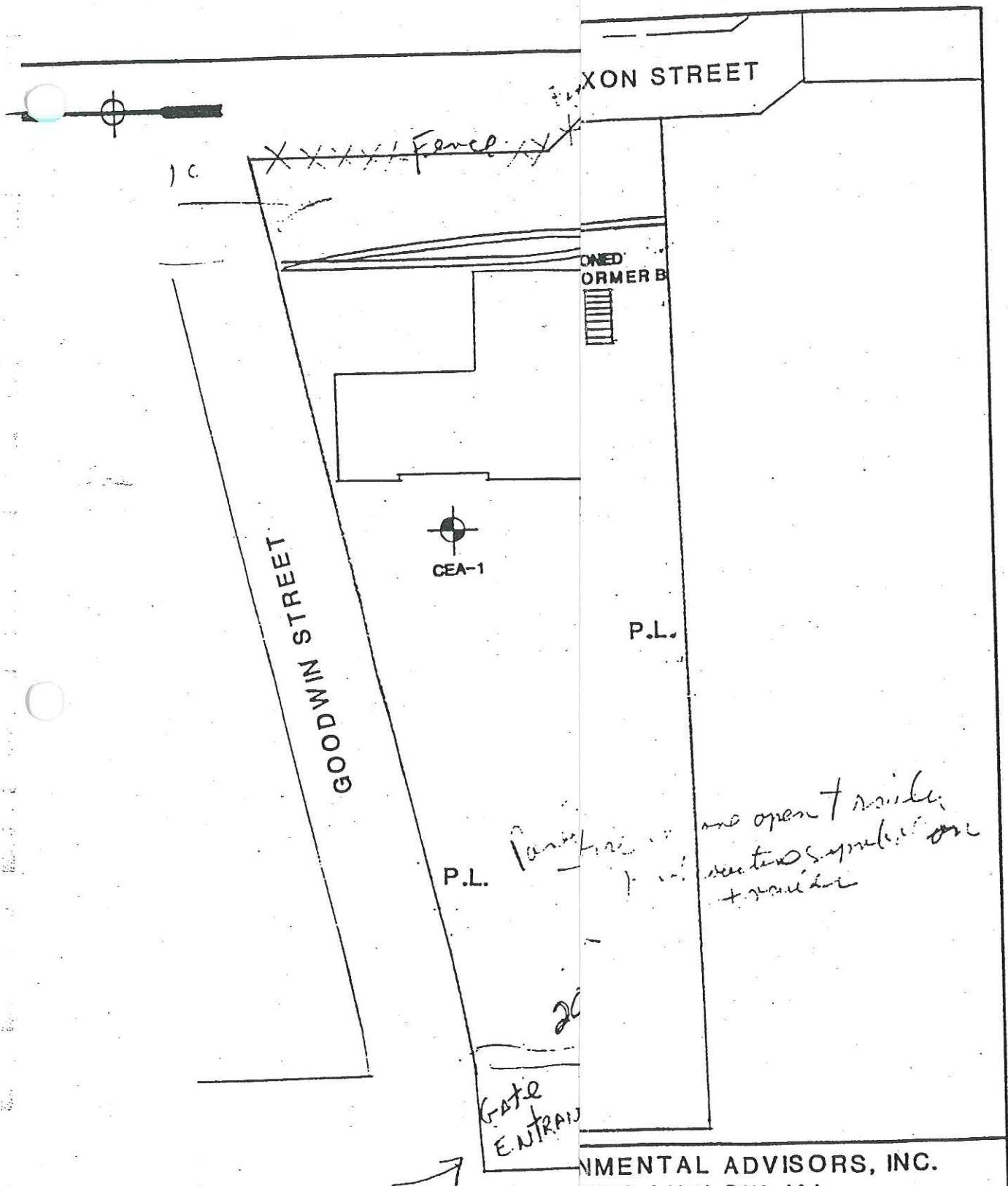


FIGURE 2

MENTAL ADVISORS, INC.
EET, LUDLOW, MA.

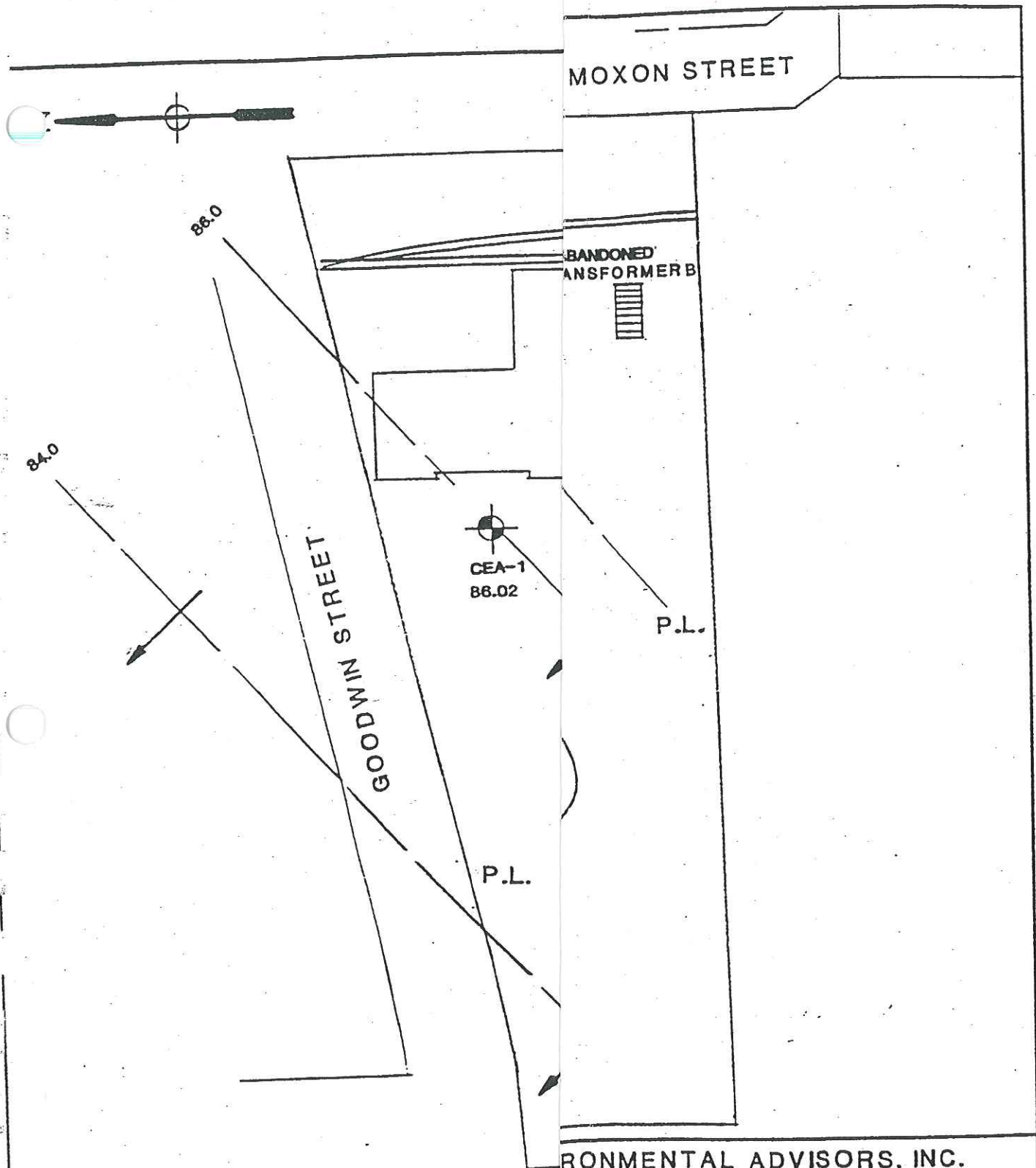
BY

DRAWN BY

LE POINT LOCATION

HOMES
RICHARD, MA.

DRAWING NUMBER
1769-88



ENVIRONMENTAL ADVISORS, INC.
100 STATE STREET, LUDLOW, MA.

DESIGNED BY

DRAWN BY *KC*

FIGURE 3

WATER SOURCES AND FLOW DIRECTION

100 HOMES
ORCHARD, MA.

DRAWING NUMBER
1769-88

DATE PAGE 44

4034 N. 2ND AVE. - INDUSTRIAL PARK

11-11-55

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10-25-54

CE - 3 128

8 1988

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CORPORATE ENVIRONMENTAL ADVIS.

STEVE MIGRIDICHIAN

453 CENTER ST.

LUDLOW, MA. 01056

COLLECTED

RECEIVED:

REPORTS

$$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$$

17:57

11:20 .

FINAL REPORT

COMMENTS

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CODE PAGE

参考文献

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11:20

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DEC 30 1988

CORPORATE ENVIRONMENTAL ADVIS.
STEVE MIGRIDICHIAN
453 CENTER ST.
LUDLOW, MA. 01056

COLLECTED	RECEIVED	REPORTED
12/07/88	12/07/88	12/29/88
00:00	17:58	15:00'

FINAL REPORT

COMMENT:

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
GENERAL INFORMATION						
(COLLECTOR: CEA)						
QA 8240 (SOIL)						
ROMETHANE	ND					
OETHANE	ND					
L CHLORIDE	ND					
ROETHANE	ND					
YLENE CHLORIDE	ND					
HLOORFLUORO-CH4	ND					
DICHLOROETHENE	ND					
DICHLOROETHANE	ND					
12DICHLOROETHENE	ND					
ROFORM	ND					
DICHLOROETHANE	ND					
1 CHLOROETHANE	ND					
ON TETRACHLORIDE	ND					
ODICHLOROMETHANE	ND					
DICHLOROPROPANE	ND					
3DICHLOROPROPENE	ND					
HLOOROETHENE	ND					
ENE	ND					
DMOCHLOROMETHANE	ND					
2TRICHLOROETHANE	ND					
13DICLOROPROPENE	ND					
DFORM	ND					
TETRACLOROETHANE	ND					
ACHLOROETHENE	ND					
ENE	ND					
ROBENZENE	ND					
L BENZENE	ND					
DICHLOROBENZENE	ND					
DICHLOROBENZENE	ND					
DICHLOROBENZENE	ND					
NE	ND					
	ND					
	DETECTION LIMIT = 1000 UG/KG.					
	ND					
	DETECTION LIMIT = 500 UG/KG.					
	ND					
	DETECTION LIMIT = 1000 UG/KG.					
ONF						
QUED ON NEXT PAGE						
# 1769-98 (CEA-68)						

A DIVISION OF COOPERATING MANAGEMENT, INC.
ROPKINTON INDUSTRIAL PARK
100 SOUTH ST.
ROCKFORD, ILL. 61101
TELEPHONE 393-1743

000452



Page 2

105

1707-00 (LEH-00)

DEC 30 1988

CORPORATE ENVIRONMENTAL ADVIS.
STEVE MIGRIDICHIAN
453 CENTER ST.
LUDLOW, MA. 01056

COLLECTED	RECEIVED	REPORTED
12/07/88	12/07/88	12/27/88
00:00	17:58	15:00

FINAL REPORT

CONTENTS

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
DETECTION LIMIT	ND		50 UG/KG UNLESS OTHERWISE INDICATED.			
ESTICIDES (SOIL)						
IN	ND					
A-BHC	ND					
IN	ND					
-BHC	ND					
A-BHC	ND					
A-BHC (LINDANE)	ND					
RDANE	ND					
-DDD	ND					
-DDE	ND					
DDT	ND					
DRIN	ND					
SULFAN I	ND					
SULFAN II	ND					
SULFAN SULFATE	ND					
IN ALDEHYDE	ND					
ACHLOR	ND					
ACHLOR EFOXIDE	ND					
DXYCHLOR	ND					
PHENE	ND					
DETECTION LIMIT	2,500	UG/KG				
PBS (SOIL)						
1016	155,800	UG/KG				
1221	ND					
1232	ND					
1242	ND					
1248	ND					
1254	ND					
1260	ND					
DETECTION LIMIT	25,000	UG/KG				

LIBRARY SEARCH VOLATILES

TOXICITY POLLUTANTS: TENTATIVELY IDENTIFIED COMPOUNDS: NONE FOUND

*** THIS IS A FINAL REPORT. ***

WATER CONTROL LABORATORIES
 A DIVISION OF COOPERATING MANAGEMENT, INC.
 HOPKINTON INDUSTRIAL PARK
 106 SOUTH ST.
 HOPKINTON, MA. 01748
 517-435-8824

83443987

000452

T09 1

SAMPLE IDENTIFICATION INFORMATION

1769-88 (CEA-6S)

DEC 16 1988

PREP BY:

CORPORATE ENVIRONMENTAL ADVIS.
 STEVE MIGRIDICHIAN
 453 CENTER ST.
 LUDLOW, MA. 01056

COLLECTED	RECEIVED	REPORTED
12/07/88	12/09/88	12/15/88
00:00	18:00	16:53

COMMENT:

FINAL REPORT

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
GENERAL INFORMATION						
(COLLECTOR: CEA)						
SAMPLE PREPARATION						
EXTRACTION	12/9/88					
STION-METALS	12/12/88					
STION-HYDRIDES	12/12/88					
STION-MERCURY	12/9/88					
TRACE METALS						
MONY	<0.003	MG/L				
LIUM	<0.001	MG/L				
NIC	<0.005	MG/L				
IUM	0.160	MG/L				
MI, TOTAL	0.030	MG/L				
ER	0.30	MG/L				
	0.920	MG/L				
URY	<0.001	MG/L				
EL	0.047	MG/L				
NIUM	<0.005	MG/L				
ER	<0.001	MG/L				
	5.9	MG/L				
LLIUM	<0.005	MG/L				
*** THIS IS A FINAL REPORT. ***						

[illegible]

DEC 28 1999

Summary:

CORPORATE ENVIRONMENTAL ADVIS.
STEVE MIGRIDICHIAN
453 CENTER ST.
LUDLOW, MA. 01056

COLLECTED	RECEIVED	REPORTED
12/07/88	12/09/88	12/23/88
00:00.	17:59	13:43'

FINAL REPORT

COMMENT:

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
GENERAL INFORMATION						
(COLLECTOR: CEA)						
PESTICIDES (SOIL)						
RIN	ND					
HA-BHC	ND					
A-BHC	ND					
RIN	ND					
MA-BHC	ND					
TA-BHC (LINDANE)	ND					
ORDANE	ND					
'-DDD	ND					
'-DDE	ND					
'DDT	ND					
LDEN	ND					
OSULFAN I	ND					
OSULFAN II	ND					
OSULFAN SULFATE	ND					
RIN ALDEHYDE	ND					
TACHLOR	ND					
TACHLOR EPOXIDE	ND					
HOXYCHLOR	ND					
APHENE	ND					
SECTION LIMIT	50	UG/KG				
PCBS (SOIL)						
-1016	ND					
-1221	ND					
-1232	ND					
-1242	ND					
-1248	ND					
-1254	ND					
-1260	321.1	UG/KG				
SECTION LIMIT	250	UG/KG				

MISCELLANEOUS TESTING

- SOIL : SEE SEPARATE REPORT.
*** THIS IS A FINAL REPORT. ***



WATER CONTROL LABORATORIES
A DIVISION OF COOPERATING MANAGEMENT INC.
ROCKINGTON INDUSTRIAL PARK
100 SOUTH ST.
ROCKINGTON, MA 01748
508-403-4324

WORK ORDER
8344-3989

ACCOUNT #
000452

CODE PAGE #

SUPPLEMENTATION INFORMATION

1769-88 (Tracks)

DEC 28 1988

PERFORMED BY:

Corporate Environmental Advisors
455 Center Street
Ludlow, MA.

COLLECTED	RECEIVED	REPORTED
12/7/88	12/7/88	12/27/88

COMMENT:

TESTS	RESULTS	UNITS	REFERENCE RANGE	LOW	ACCEPTABLE RANGE GRAPHIC RESULTS	HIGH
POLYNUCLEAR AROMATIC HYDROCARBONS (Expressed in µg/Kg)						
ppb						
Detection Limit:						
Acenaphthene	None Detected		1.9			
Acenaphthylene	None Detected		3.5			
Anthracene	1,660		1.9			
Benzo(a)anthracene	4,150		7.8			
Benzo(b)fluoranthene	6,850		4.8			
Benzo(k)fluoranthene	9,700		2.5			
Benzo(ghi)perylene	3,600		4.1			
Benzo(a)pyrene	4,700		2.5			
Chrysene	5,900		2.5			
Dibenz(a,h)anthracene	None Detected		2.5			
Fluoranthene	7,000		2.2			
Fluorene	None Detected		1.9			
Indeno(1,2,3-c,d)pyrene	4,750		3.7			
Naphthalene	None Detected		1.6			
Phenanthrene	4,000		5.4			
Pyrene	7,400		1.9			

CHAIN OF CUSTODY RECORD

[illegible]



CORPORATE ENVIRONMENTAL
ADVISORS, INC.

Ludlow & Worcester, MA

CLIENT AM Dream Homes

PROJECT NAME 21-E

LOCATION Springfield, Ma

BORING
NUMBER

CEA-1

SHEET

No. 1
of 1

RILLER B + G

BORING/WELL LOG

FILE NO. 1769-88

SITE LOCUS

INSPECTOR F. Sears

DATE START 11/08/88

DATE FINISH 11/08/88

	Casing	Sampler	Core Barrel
TYPE	<u>H.S.A.</u>	<u>S.S.</u>	
SIZE I.D.	<u>3 3/4"</u>	<u>1 3/8"</u>	
HAMMER WT.		<u>140 lb.</u>	
HAMMER FALL		<u>30"</u>	

SEE Map

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS	MW	
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.					
			0-6	6-12	12-18						
	S-1	6'-2'	7	20	15	12"	<1	F I L L ?	Med Red Brown, Fine, Silty - Coarse Sand + Gravel, Loose, Dry, No Odor		
	S-2	4'-5.5'	8	13	17	12"	<1			Med Brown, Red Brown, F-M Sand + Gravel	
	S-3	9'-10.5'	13	15	19	12"	<1	S A N D	Top 1/2 Med Red Brown, Bottom 1/2 light Brown, F-M Well Sorted Sand, Loose, Dry, No Odor		
0											
	4	14'-15.5'	11	11	9	15"	<1	T I L L	Top 4" Light Yellow Brown, Fine Well Sorted, Mottled Sand, Loose, Dry, Fine, Silty Sand, + Fine Gravel (Till?) Loose, Wet, No Odor		
.5											
	S-5	19'-19.25'	100/25	-	-	10"	<1	▽ =	Red Brown, F-M Sand, Silt + Gravel, Med Dense, Wet, No Odor		
10											
								///	EOB @ 22.5'		
									22' Well Point		
									10' X 2" Screen to 12'		
									Riser to surface		
									Natural Fill Pack		
									Cement + Roadbox @ Surface		
10											

SAMPLE IDENTIFICATION
S — SPLIT SPOON
T — THIN WALL TUBE
U — UNDISTURBED PISTON
O — OPEN END ROD
W — WASH SAMPLE
A — AUGER SAMPLE

PENETRATION RESISTANCE
140 lb. Wt. falling 30" on 2" O.D. Sampler
Cohesionless Density Cohesive Consistency

0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	Med. Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-20	Very Stiff

PROPORTIONS USED

trace	0-10%
little	10 to 20%
some	20 to 35%

REMARKS:

HNU-ppm