

SITE: Fletcher's  
BREAK: 2.2 OUI  
OTHER: FOIA Exempt 7c

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INDOOR DUST SAMPLING SUMMARY  
[REDACTED]  
FLETCHER'S PAINT WORKS AND STORAGE  
FACILITY SUPERFUND SITE  
MILFORD, NEW HAMPSHIRE  
November 15, 1994.

Prepared for:

U.S. Environmental Protection Agency  
Emergency Planning and Response Branch  
60 Westview Street  
Lexington, Massachusetts 01273

CONTRACT NO. 68-WO-0036

TDD NO. 01-9410-42C

PCS NO. 1172

DC. NO. 02514

Prepared by:

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

February 1995

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## I. INTRODUCTION

The following is a summary of the U.S. Environmental Protection Agency (EPA), Region I, Emergency Planning and Response Branch's (EPRB) and Waste Management Division's (WMD) actions conducted at the Fletchers Paint Works Site (the site). From a period of October 25 to November 15, 1994, members of the Roy F. Weston, Inc., Technical assistance Team (TAT), along with representatives of EPA conducted preliminary home surveys and subsequently indoor dust sampling at a total of eight residences in the vicinity of the site.

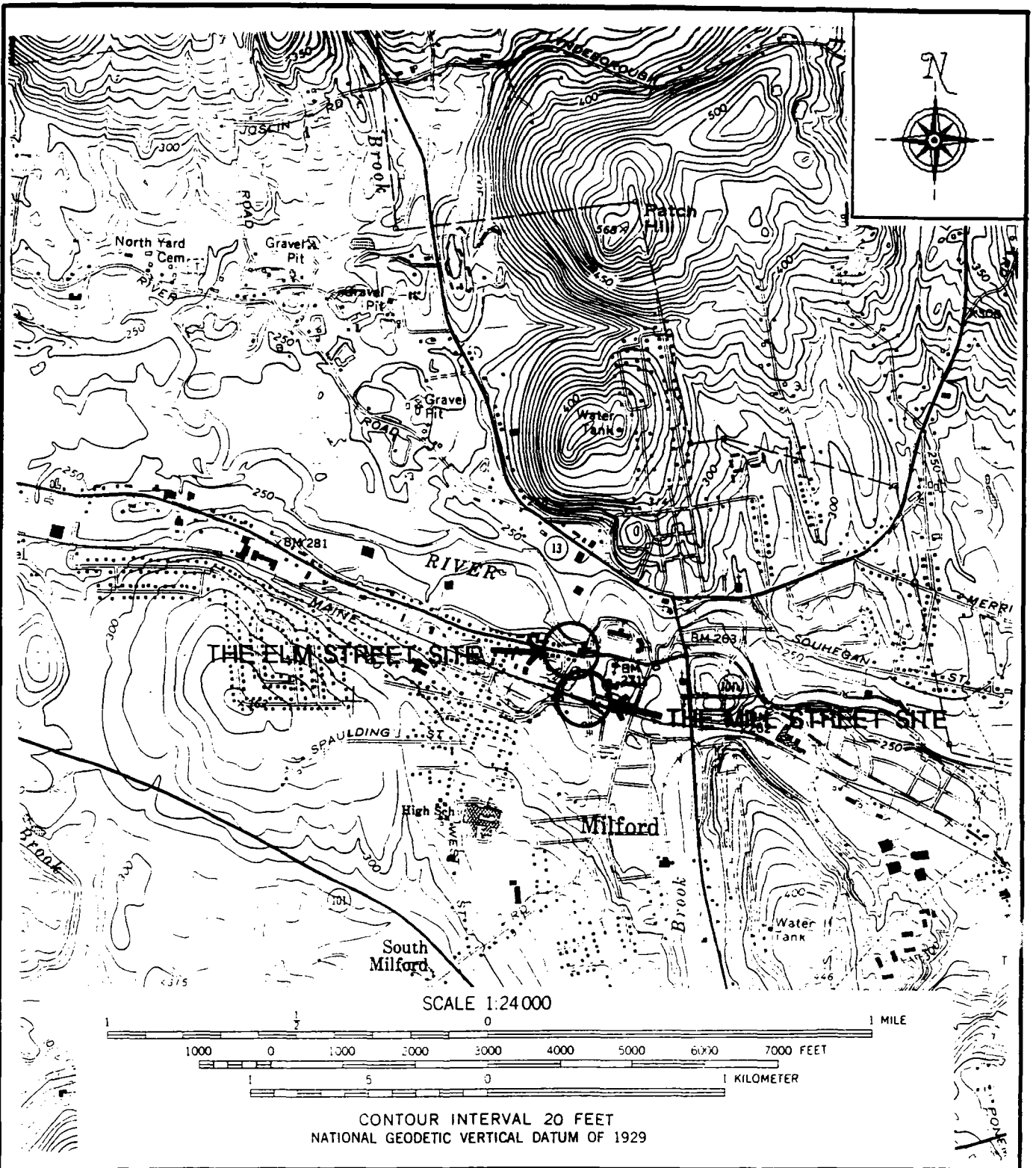
Indoor dust sampling was conducted based on the possibility that polychlorinated biphenyls (PCBs) previously detected in residential soil could have been transported into the residences on the soles of shoes and on the bottom of pets' feet. As a result, EPA concluded that a potential existed for PCBs to be present in the indoor house dust of these residences. In an effort to determine whether this potential indoor PCB dust contamination existed and posed a threat to the residents, EPA and TAT performed indoor dust sampling at the eight residences.

## II. SITE BACKGROUND

The site is located in Milford, Hillsborough County, New Hampshire (see Figure 1 - Site Location Map). The former manufacturing plant and retail store is located at 39 Elm Street (Route 101A) (the Elm Street site), while the former pigment storage property is located on Mill Street (the Mill Street site). The company operated at these two locations from the early 1950's until 1991. Paints and stains were manufactured, stored, distributed, and sold on site. Prior to its use for paint manufacturing, the Elm Street site was the location of an industrial facility that manufactured baked enamels and lacquers. Both sites are currently included on the EPA's National Priority List (NPL), as the Fletcher's Paint Works and Storage Facility Superfund Site.

### Elm Street Site

The Elm Street site is approximately 1.6 acres and consists of one retail outlet and manufacturing building and a gravel parking area. It is bordered by a historical cemetery to the east, the Souhegan River to the north and northeast, Keyes Drive to the west and Elm Street to the south. The surrounding area is a mix of residential and commercial properties. To the west of Keyes Drive is Keyes Field, a municipal recreation area. The Keyes municipal water supply is located at Keyes Field and previously supplied water to the town. As a result of an initial EPA removal preliminary assessment/site investigation (PA/SI) conducted in 1987, EPA identified 863 drums containing a variety of polyaromatic compounds and paint pigments on the site. These drums were subsequently removed from the Elm Street site by EPA in 1988.



**FIGURE 1**

**SITE LOCATION MAP  
FLETCHER PAINT WORKS AND STORAGE FACILITY  
ELM STREET AND MILL STREET SITES  
MILFORD, NEW HAMPSHIRE**

SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP,  
MILFORD, NH QUADRANGLE 1985.



DRAWN BY RILEY	DATE 10/94	PCS # 1042
APPROVED BY <i>[Signature]</i>	DATE 2/95	TDD # 01-941042

The unpaved parking area at the Elm Street site was also found to contain high levels of PCBs in the soil. EPA placed an 8-inch gravel cap over the parking area prior to the drum removal project.

#### Mill Street Site

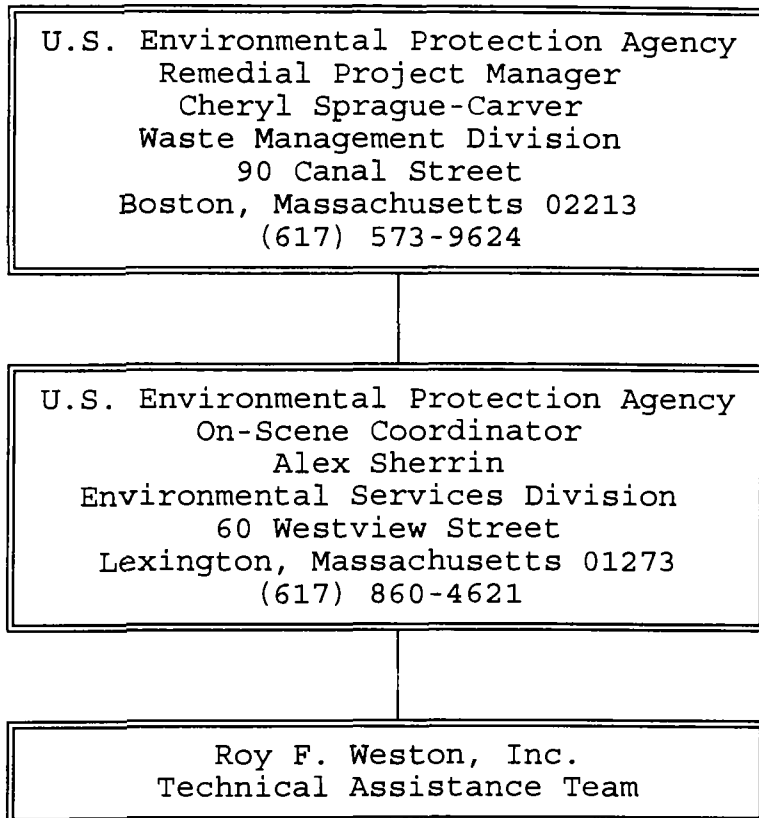
The Mill Street site is approximately 0.2 acres. It is bordered by a Boston & Maine Railroad right-of-way to the north, Cottage Street to the east, Mill Street to the south, and the Draper Energy property to the west. In addition, the Hampshire Paper Company is located approximately 300 feet to the northwest. The surrounding area is a mix of commercial and residential properties. As a result of the initial EPA PA/SI conducted in 1987, EPA discovered several hundred bags and dozens of fiberboard drums containing paint pigments in the storage building located on the Mill Street site at that time. EPA also determined that the Mill Street site contained high levels of PCBs in the soil, as well as in core samples collected from the former wooden storage building. In 1988, EPA placed an 8-inch gravel cap over the portions of the site not covered by the storage building. The bags and fiberboard drums of paint pigments were not removed at this time due to the fact that the manufacturing plant was still in operation and the paint pigments were considered process chemicals.

In 1992, at the request of the local fire department, EPA conducted a site visit and discovered that bags and fiberboard drums of paint pigments were still present on site. These items were not removed during the previous removal activities due to the fact that the manufacturing plant was still in operation and the paint pigments were considered process chemicals. In 1993, EPA demolished the wooden storage building and removed all of the remaining bags and fiberboard drums.

Between November 1991 to December 1993, EPA's WMD collected soil samples from residential properties surrounding both of the sites and identified levels of total PCB contamination ranging from not detected (ND) to 42 parts per million (ppm). In addition, The State of New Hampshire Department of Environmental Services conducted surface soil sampling at residential properties for the EPA during this period. Sample results identified levels of total PCB concentrations up to 86 ppm at one of the properties. Based on the possibility that the PCBs detected in residential soil could have been transported into the residences on the soles of shoes and on the bottom of pets' feet, EPA concluded that the potential existed for PCBs to be present in the indoor house dust of these residences. In September 1994, in an effort to determine whether this potential indoor PCB dust contamination existed and posed a threat to the residents, the WMD requested that the EPA EPRB perform an indoor dust survey at eight residences in the proximity of both the Elm Street and Mill Street sites.



### III. PROJECT ORGANIZATION



### IV. SITE CHRONOLOGY

#### October 25, 1994

1630 EPA Remedial Project Manager (RPM) Cheryl Sprague-Carver, EPA On-Scene Coordinator (OSC) Alex Sherrin and TAT member Dawn Riley arrived at the [REDACTED] residence to conduct a home survey, determine the total area of the residence, select sample station locations, and draw the existing floor plan (see Appendix A - Home Survey Documentation).

1730 On-site activities were completed; EPA and TAT departed the residence.

#### November 15, 1994

1630 RPM Sprague, OSC Sherrin, and TAT member Riley arrived at [REDACTED] to perform dust sampling activities. TAT member Riley collected vacuum dust samples (see Appendix B - Sample Location Map) and photodocumented the residence (see Appendix C - Photodocumentation Log).

1715 Upon completion of sampling activities and Chain-of-Custody Documentation (see Appendix D - Chain-of-Custody Documentation); EPA and TAT personnel departed the residence.

**V. PRELIMINARY FINDINGS**

Vacuum sample analytical data indicate that no PCB-contaminated household dust above EPA's PCB cleanup level of 10 ug/100cm<sup>2</sup> existed at the sample location.

See Appendix E, Table 2 Summary of Vacuum Dust PCB Results for details.

It should be noted that in the future, EPA is planning to perform a human health risk assessment on the residential exposure to the household dust.

Appendix A  
Home Survey Documentation

HOME SURVEY

SITE ID# [REDACTED]

Appointment Date & Time: 10/25/91 Interviewer(s): [Signature]

Do you own, rent, or lease your home?

Homeowner

Alternate Contact

Name: [REDACTED]

Name: \_\_\_\_\_

Address: [REDACTED]

Phone: (H) \_\_\_\_\_  
(W) \_\_\_\_\_

Phone: (H) [REDACTED]  
(W) [REDACTED]

1) Number of Occupants

Names

Ages

	<u>Number of Occupants</u>	<u>Names</u>	<u>Ages</u>
Adults	<u>1</u>	[REDACTED]	[REDACTED]
Children	<u>1</u>	[REDACTED]	[REDACTED]
	_____	_____	_____
Pets	<u>1</u>	<u>[REDACTED]</u>	_____
	_____	_____	_____

Do other children frequently visit your residence? How many?

No

2) How long have you lived at your current residence?

7 years

3) What year was this house built? (oldest part)

1962

4) What type of home do you live in? (ie: wood, brick, mobile home)

5) Has any part of your house been repainted, sanded, chemically or heat stripped, or otherwise refinished within the last year?

The entire trailer was rebuilt inside out ten years.

**HOME SURVEY**

**SITE ID#** [REDACTED]

6) Does your child attend a daycare or preschool or babysitter (secondary residence)?

7) How many hours a day on the average do the children play outdoors?

8A) Caregiver Summary Data:

INDUSTRIES	PRIMARY CAREGIVER		OTHER PARENT		OTHER ADULT	
	Y/N	BEGIN/END DATES	Y/N	BEGIN/END DATES	Y/N	BEGIN/END DATES
painting	Y	But just at the house				
building demolition	N					
oil refinery	N					
sand blasting	N					
auto body work	N					
chemical plant	N					

*Electronics*

*Mechanic - big bore / Clerk for City of Washoe*

8B) Have you or anyone living at your residence worked at the Fletcher's Paint Works in the past?

8C) Have you or anyone living at your residence spent anytime, past or present, at the Fletcher's Paint Works Site?

**HOME SURVEY**

**SITE ID#** [REDACTED]

9) Number of Floors 1

Is there a basement present? [ ] Yes [  ] No

Is it a living space? [ ] Yes [  ] No

Approximate Dimensions 10' x 10'

Other: \_\_\_\_\_

Is there an attic present? [ ] Yes [  ] No

Is it a living space? [ ] Yes [  ] No

Approximate Dimensions 10' x 10'

Other: \_\_\_\_\_

10) List areas where Asbestos Containing Materials (ACMs) may be/are present and describe their condition:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11) Describe type and general operation of air heating/cooling system:

central hot air  
\_\_\_\_\_  
\_\_\_\_\_

12) Which entrance to the house is used most often?

Back door

HOME SURVEY

SITE ID# [REDACTED]

13) Room Layout and Dimensions

- Sketch plan of room layout for each floor on attached sheet
- List names, dimensions, type of foot traffic and frequency of cleaning for each room:

<u>Room Name</u>	<u>Dimensions (ft. x ft.)</u>	<u>Type of Floor Surface (ie, wood, carpeted, tiled, etc.)</u>
------------------	-------------------------------	--

Entry-ways

<u>Back door E1</u>	<u>                    </u>	<u>carpet</u>
<u>Front porch E2</u>	<u>                    </u>	<u>tile</u>
<u>                    E3</u>	<u>                    </u>	<u>                    </u>
<u>Living room</u>	<u>                    </u>	<u>carpet</u>
<u>Kitchen</u>	<u>                    </u>	<u>linoleum tile</u>

Children's Bedrooms

<u>Marina C1</u>	<u>                    </u>	<u>carpet</u>
<u>                    C2</u>	<u>                    </u>	<u>carpet</u>
<u>                    C3</u>	<u>                    </u>	<u>                    </u>

<u>Bed room</u>	<u>                    </u>	<u>carpet 9 yrs old</u>
<u>Bathroom</u>	<u>                    </u>	<u>linoleum tile</u>





FLOOR PLAN SKETCH

First Floor



Fletcher Pain +

SHEET 1 of 1

CLIENT/SUBJECT EPA/CAT

W.O. NO.

TASK DESCRIPTION

TASK NO.

PREPARED BY

DEPT

DATE

APPROVED BY

MATH CHECK BY

DEPT

DATE

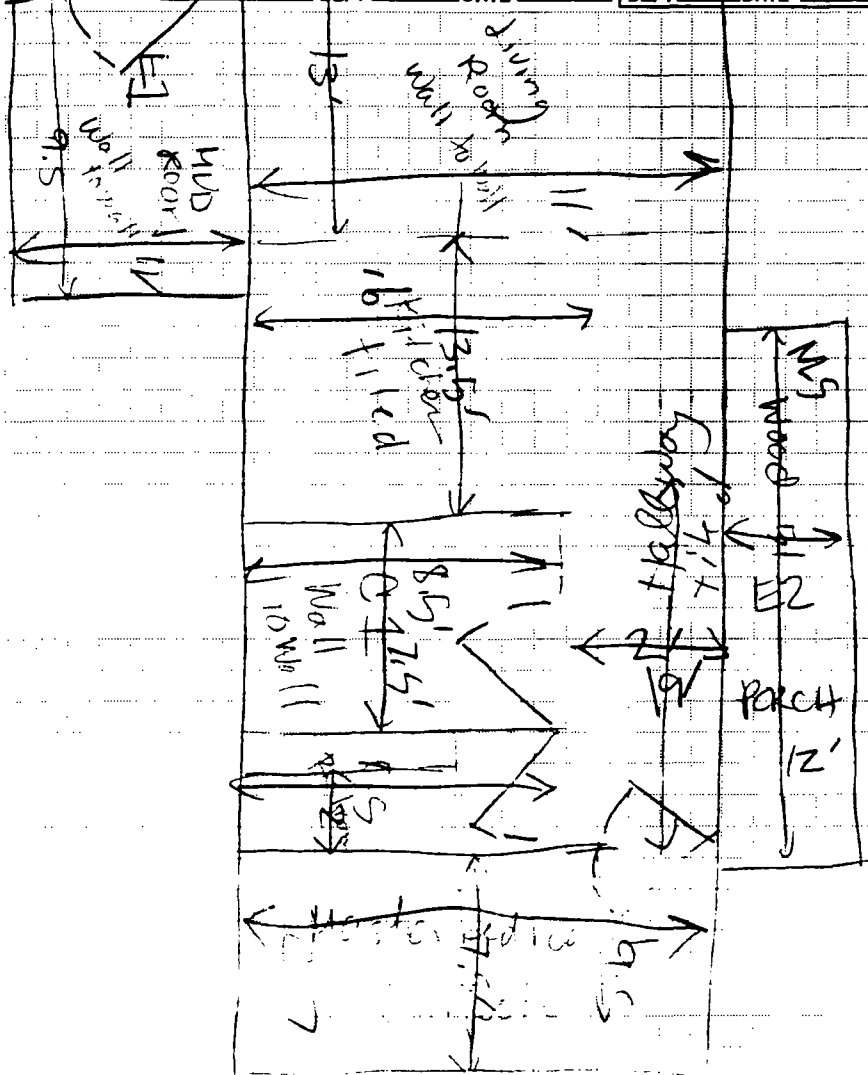
METHOD REV. BY

DEPT

DATE

DEPT

DATE

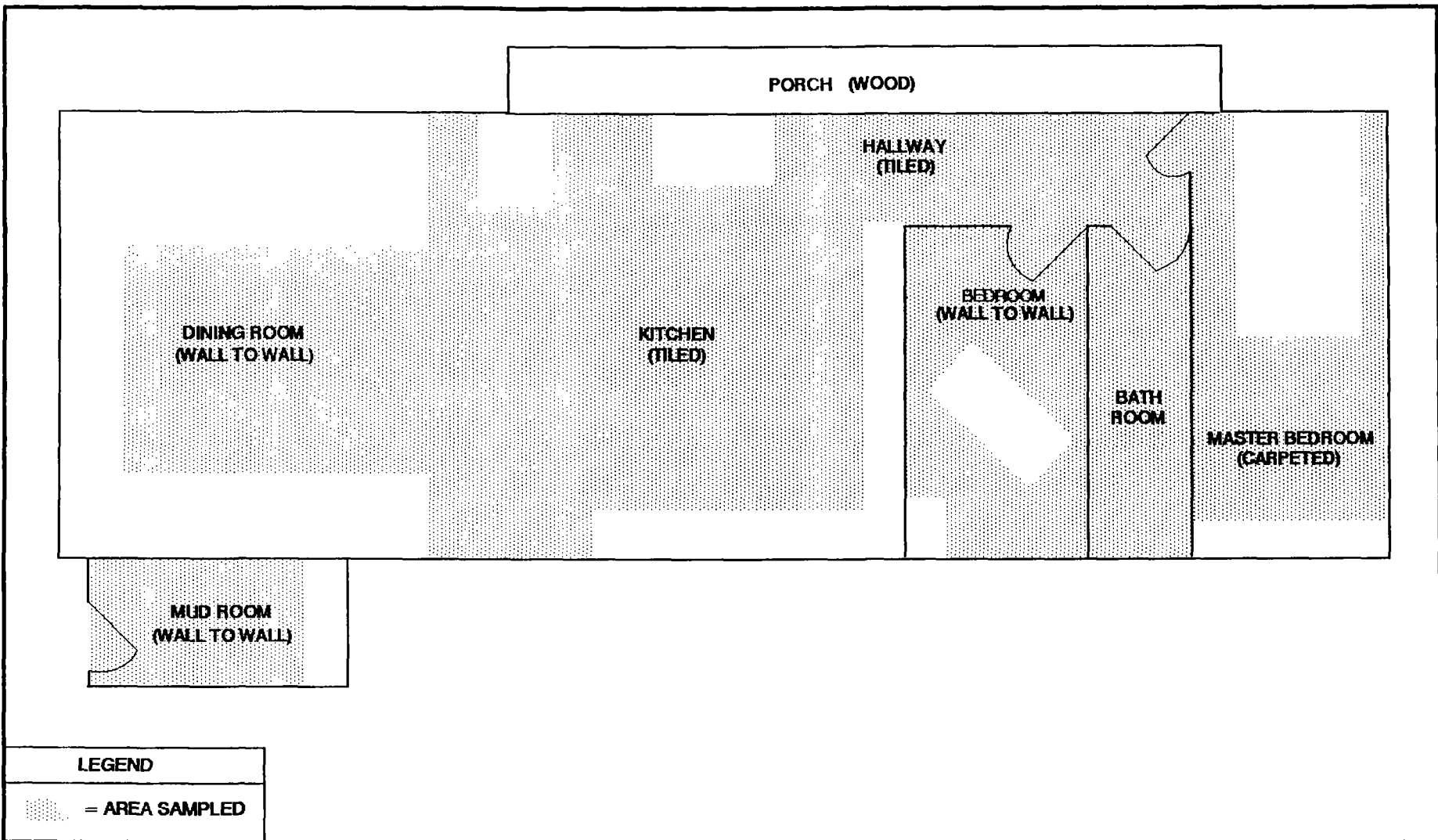


RFW 10 05 003/A 5 85

Vxx = Vacuum Sample

xx = Consecutive Numbering Convention to Differentiate Sample Station Locations

Appendix B  
Sample Location Map



**LEGEND**


 = AREA SAMPLED

**FIGURE 2**  
**SAMPLE LOCATION MAP**

INDOOR DUST SURVEY  
 FLETCHER'S PAINT WORKS AND  
 STORAGE FACILITY SUPERFUND SITE  
 MILFORD, NEW HAMPSHIRE

NOT TO SCALE



DRAWN BY GORDEN	DATE 11/94	PCS # 1042
APPROVED BY 	DATE 2/95	TDD # 01-9410-42

Appendix C  
Photodocumentation Log

**PHOTOGRAPHY LOG SHEET**

Fletcher's Paint Works and Storage Facility Superfund Site  
Milford, New Hampshire

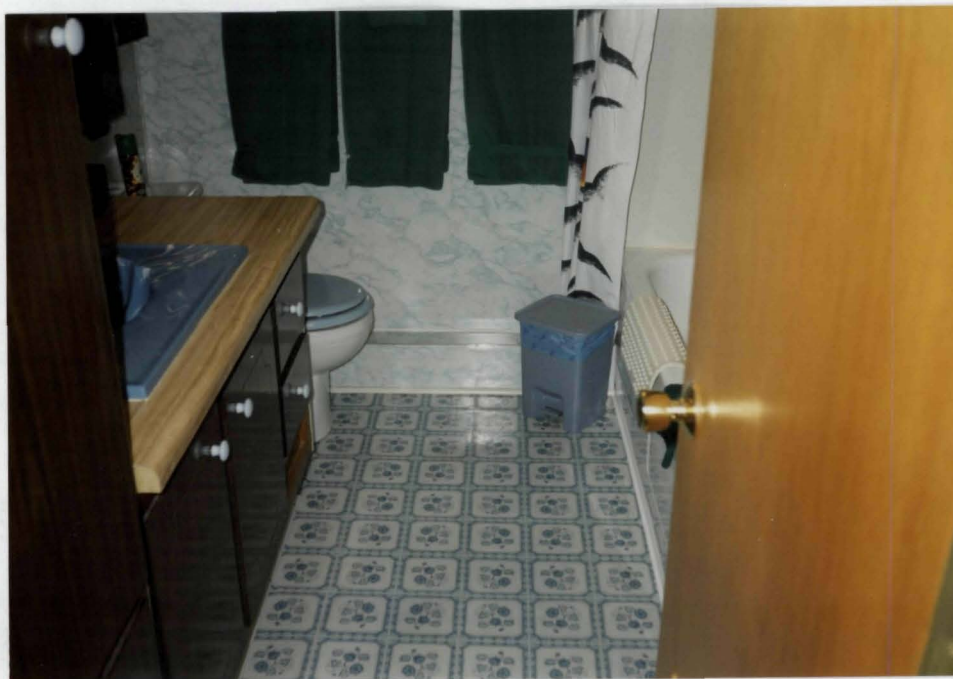


**SCENE:** Entry

**FRAME NUMBER:** 1    **DATE:** 11/15/94    **TIME:** 1500    **SKY CONDITION:** NA

**PHOTO BY:** D. Riley    **WITNESS(ES):** OSC Sherrin & RPM Sprague

**CAMERA:** Minolta    **SETTING:** Automatic    **FILM TYPE:** 35 mm    **FILM ROLL:** 02193



**SCENE:** Bathroom

**FRAME NUMBER:** 2    **DATE:** 11/15/94    **TIME:** 1500    **SKY CONDITION:** NA

**PHOTO BY:** D. Riley    **WITNESS(ES):** OSC Sherrin & RPM Sprague

**CAMERA:** Minolta    **SETTING:** Automatic    **FILM TYPE:** 35 mm    **FILM ROLL:** 02193

**PHOTOGRAPHY LOG SHEET**

Fletcher's Paint Works and Storage Facility Superfund Site  
Milford, New Hampshire



**SCENE:** Living Room

**FRAME NUMBER:** 3    **DATE:** 11/15/94    **TIME:** 1505    **SKY CONDITION:** NA

**PHOTO BY:** D. Riley    **WITNESS(ES):** OSC Sherrin & RPM Sprague

**CAMERA:** Minolta    **SETTING:** Automatic    **FILM TYPE:** 35 mm    **FILM ROLL:** 02193



**SCENE:** Master Bedroom

**FRAME NUMBER:** 4    **DATE:** 11/15/94    **TIME:** 1505    **SKY CONDITION:** NA

**PHOTO BY:** D. Riley    **WITNESS(ES):** OSC Sherrin & RPM Sprague

**CAMERA:** Minolta    **SETTING:** Automatic    **FILM TYPE:** 35 mm    **FILM ROLL:** 02193

**PHOTOGRAPHY LOG SHEET**

Fletcher's Paint Works and Storage Facility Superfund Site  
Milford, New Hampshire



**SCENE:** Childs Bedroom  
**FRAME NUMBER:** 5    **DATE:** 11/15/94    **TIME:** 1510    **SKY CONDITION:** NA  
**PHOTO BY:** D. Riley    **WITNESS(ES):** OSC Sherrin & RPM Sprague  
**CAMERA:** Minolta    **SETTING:** Automatic    **FILM TYPE:** 35 mm    **FILM ROLL:** 02193



**SCENE:** Kitchen  
**FRAME NUMBER:** 6    **DATE:** 11/15/94    **TIME:** 1510    **SKY CONDITION:** NA  
**PHOTO BY:** D. Riley    **WITNESS(ES):** OSC Sherrin & RPM Sprague  
**CAMERA:** Minolta    **SETTING:** Automatic    **FILM TYPE:** 35 mm    **FILM ROLL:** 02193

**PHOTOGRAPHY LOG SHEET**

**Fletcher's Paint Works and Storage Facility Superfund Site  
Milford, New Hampshire**



**SCENE:** Mud Room

**FRAME NUMBER:** 7    **DATE:** 11/15/94    **TIME:** 1510    **SKY CONDITION:** NA

**PHOTO BY:** D. Riley    **WITNESS(ES):** OSC Sherrin & RPM Sprague

**CAMERA:** Minolta    **SETTING:** Automatic    **FILM TYPE:** 35 mm    **FILM ROLL:** 02193



Appendix D


Chain-of-Custody Documentation



Appendix E  
Sample Results

**TABLE 1**

**Concentrations of PCBs in Vacuum Dust  
Reported as Dust Concentrations in ug/kg  
November 15, 1994.**



Sample Number	MS4
Aroclor 1016	--
Aroclor 1221	--
Aroclor 1232	--
Aroclor 1242	--
Aroclor 1248	2400
Aroclor 1254	--
Aroclor 1260	120 J
<b>Total PCBs</b>	<b>2520</b>

Notes:

Ug/kg = microgram per kilogram.

J = The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.

-- = The compound was analyzed for but not detected.

**TABLE 2**

**Summary of Vacuum Dust PCB Results  
Reported as Loading Rates  
November 15, 1994**



Sample Number	MS4
Total Area of the Living Space (ft <sup>2</sup> )	542
Area Sampled (ft <sup>2</sup> )	370.28
Sample Weight (g)	33.7
Total PCBs (ug/100cm <sup>2</sup> )	0.024

Notes:

ft<sup>2</sup> = square feet

g = grams

ug/100cm<sup>2</sup> = micrograms per 100 square centimeters

## CONVERSION CALCULATIONS

These conversion calculations are used to convert ug/kg reported from the laboratory to ug/100cm<sup>2</sup> in order to compare the sample results to the technology based cleanup objective of 10 ug/100cm<sup>2</sup> for PCBs.

$$\text{L.R.} = \text{sample result ug/kg} \times \frac{1 \text{ kg}}{1,000 \text{ g}} \times \frac{\text{sample weight in g}}{\text{ft}^2 \text{ area sampled}} \times \frac{\text{ft}^2}{929.03 \text{ cm}^2} \times 100$$

L.R. = Contaminant Loading Rate in ug/100cm<sup>2</sup>

### Notes:

- 1) ug/100cm<sup>2</sup> = micrograms per 100 square centimeters
- 2) ug = micrograms
- 3) kg = kilograms
- 4) g = grams
- 5) ft<sup>2</sup> = square feet
- 6) cm<sup>2</sup> = square centimeters