APPENDIX B - STANDARD PRE-DESIGN SURVEY TABLES AND FORMS

This appendix contains tables and example forms to be used in completing lead and asbestos Pre-Design Surveys. These tables and forms include:

Table B-1

Building/Units to be Surveyed

Building Identification	Areas to be included in Project Survey	Approximate Square Feet of Project Areas	Type of Survey			
			Lead		Asbestos	
			Interior	Exterior	Interior	Exterior

Table B-2
Examples of Interior and Exterior Building Component Types

Interior Painted Components that should be tested for lead include:	
Air Conditioners	Fireplaces
Balustrades	Floors
Baseboards	Handrails
Bathroom Vanities	Newel Posts
Beams	Other Heating Units
Cabinets	Shelves and Supports
Ceilings	Painted Electrical Fixtures
Chair Rails	Window Sashes and Trim
Columns	Stair Stringers
Counter Tops	Stair Treads and Risers
Crown Molding	Stools and Aprons
Doors and Trims	Walls

Exterior Painted Components that should be tested for lead include:	
Air Conditioners	Handrails
Balustrades	Lattice Work
Bulkheads	Mailboxes
Ceilings	Painted Roofing
Chimneys	Railing Caps
Columns	Rake Boards
Corner Boards	Sashes
Doors and Trim	Siding
Fascia	Soffits
Floors	Stair Risers and Treads
Gutters and Downspouts	Stair Stringers
Joists	Window and Trim
Fences	Storage Sheds and Garages
Laundry Line Posts	Swing Sets and Other Play Equipment

Source: Table 7.1 of the 1997 Revision to the HUD Guidelines

Table B-3
Asbestos-Containing Materials Found in Buildings

Subdivision	Generic Name	Asbestos(%)	Dates of Use*	Binder/Sizing
Preformed Thermal Insulating Products	Batts, Blocks, and Pipe Covering			
	85% Magnesia	15	1926-1949	Magnesium Carbonate
	Calcium Silicate	6-8	1949-1971	Calcium Silicate
Textiles	Cloth Blankets (Fire)	100	1910-Present	None
Surfacing Material	Sprayed- or Troweled-On	1-95	1935-1970	Sodium Silicate, Portland Cement, Organic Binders
	Felts:	90-95	1920-Present	Cotton/Wool
	Blue Stripe	80	1920-Present	Cotton
	Red Stripe	90	1920-Present	Cotton
	Green Stripe	95	1920-Present	Cotton
	Sheets	50-95	1920-Present	Cotton/Wool
	Cord/Rope/Yarn	80-100	1920-Present	Cotton/Wool
	Tubing	80-85	1920-Present	Cotton/Wool
	Tape/Strip	90	1920-Present	Cotton/Wool
	Curtains (Theater, Welding)	60-65	1945-Present	Cotton
Cementitious Concrete-Like Products	Extrusion Panels	8	1965-1977	Portland Cement
	Corrugated	20-45	1930-Present	Portland Cement
	Flat	40-50	1930-Present	Portland Cement
	Flexible	30-50	1930-Present	Portland Cement
	Flexible Perforated	30-50	1930-Present	Portland Cement
	Laminated (Outer Surface)	35-50	1930-Present	Portland Cement
	Roof Tiles	20-30	1930-Present	Portland Cement
	Clapboard and Shingles	20-50	1930-Present	1930-Present
	Clapboard	12-15	1944-1945	Portland Cement
	Siding Shingles	12-14	Unknown-Present	Portland Cement
	Roofing Shingles	20-32	Unknown-Present	Portland Cement
	Pipe	12-15	1935-Present	Portland Cement
Roofing Felts	Smooth Surface	10-15	1910-Present	Asphalt
	Mineral Surface	10-15	1910-Present	Asphalt
	Shingles	1	1971-1974	Asphalt

Subdivision	Generic Name	Asbestos(%)	Dates of Use*	Binder/Sizing
	Pipeline	10	1920-Present	Asphalt
Asbestos-Containing Compounds	Caulking Putties	30	1930-Present	Linseed Oil
	Adhesive (Cold Applied)	5-25	1945-Present	Asphalt
	Joint Compound	5	1945-1975	Asphalt
	Roofing Asphalt	5	Unknown-Present	Asphalt
	Mastics	5-25	1920-Present	Asphalt
	Asphalt Tile Cement	13-25	1959-Present	Asphalt
	Roof Putty	10-25	Unknown-Present	Asphalt
	Plaster/Stucco	2-10	Unknown-Present	Portland Cement
	Spackle	3-5	1930-1975	Starch, Casein, Sythetic Resins
Asbestos-Containing Compounds	Sealants, Fire/Water	50-55	1935-Present	Caster Oil Or Polyisobutylene
	Cement, Insulation	20-100	1900-1973	Clay
	Cement, Finishing	55	1920-1973	Clay
	Cement, Magnesia	15	1926-1950	Magnesium Carbonate
Asbestos Ebony Products		50	1930-Present	Portland Cement
Flooring Tile And Sheet Goods	Vinyl/Asbestos Tile	21	1950-Present	Poly(Vinyl)Chloride
	Asphalt/Asbestos Tile	26-33	1920-Present	Asphalt
	Sheet Goods/ Resilient	30	1950-Present	Dry Oils
Wallcovering	Vinyl Wallpaper	6-8	Unknown-Present	--
Paints And Coatings	Roof Coating	4-7	1900-Present	Asphalt
	Air Tight	15	1940-Present	Asphalt

Source: Table 2-1 from PWTB 420-70-8, Installation Asbestos Management Program

*The source table was compiled in 1981. Some materials with dates of use extending to "present" may no longer be in use.

Table B-4

Typical Building Materials Comprising a Toxicity Characteristic Leaching Procedure (TCLP Sample)

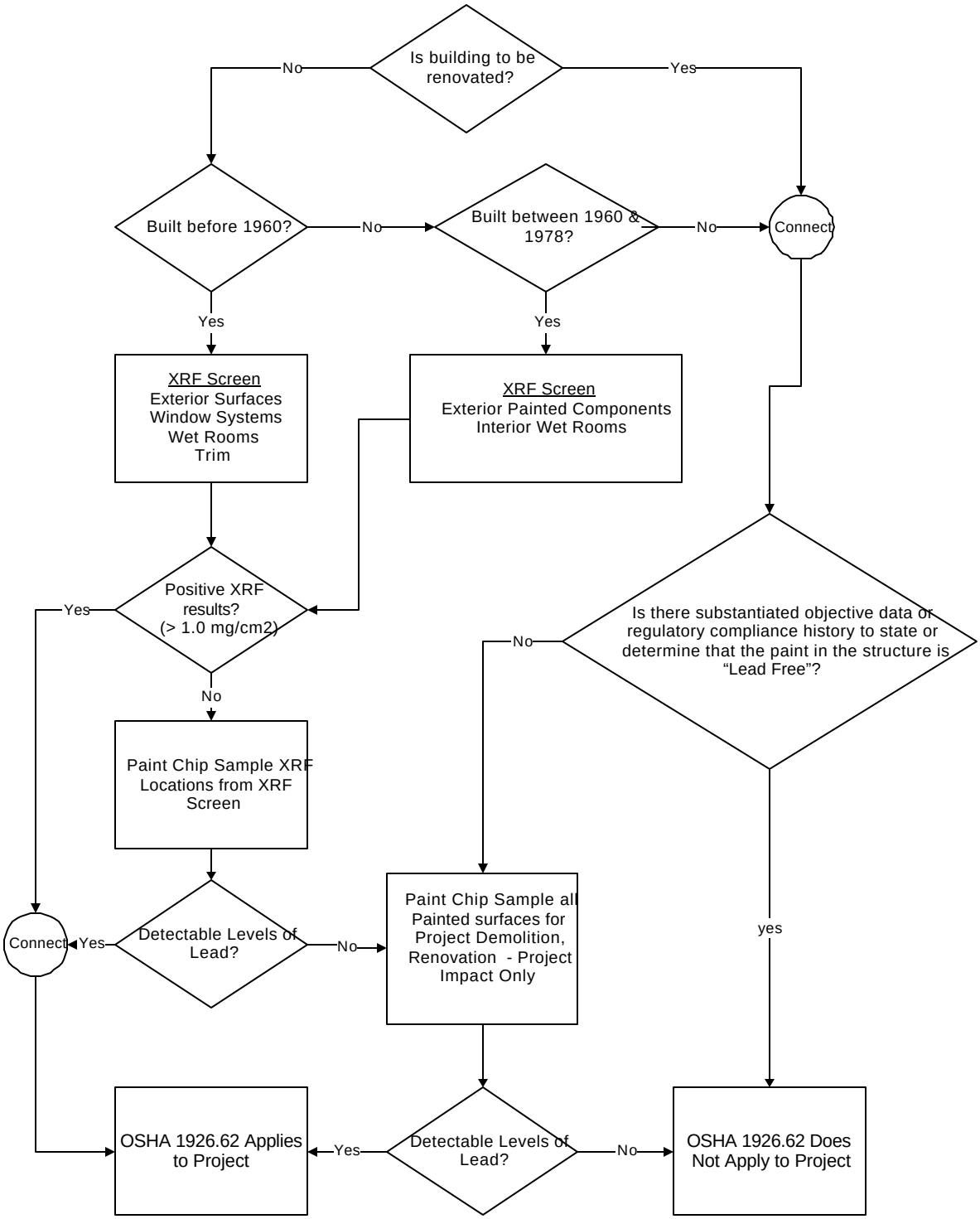
Baseboards	Handrails*
Beams	Headers
Brick*	Insulation (wall, ceiling, etc.)
Cabinets	Joists*
Ceilings (plaster, gypsum, etc.)	Rafters*
Chair Rails	Roofing Materials
Columns	Shelves and Supports
Concrete*	Siding*
Corner Boards	Soffits
Crown Molding	Stair Systems
Doors and Trim	Studs
Fascia	Walls (plaster, gypsum, etc.)
Floors	Window Systems*
Gutters and Downspouts*	Shutters and Misc. exterior trims

*These materials are most likely to be recyclables

Procedure:

1) List all building components
2) Determine those building materials/components to be recycled (i.e. glass, metal, bricks, masonry, HVAC units, etc.)
3) Identify the waste stream (the waste stream is all remaining components to be demolished)
4) Quantify waste stream materials, whether painted or not
5) Estimate each of these materials as a percentage of the total building
6) Extract a sample of each
7) Submit to laboratory (Laboratory takes piece of each sample in percentage of total building, creating a composite sample of @ 120 grams)
8) Laboratory performs TCLP test and provides results.

Table B-5
Decision Tree
Lead Sampling for Buildings to be Renovated/Demolished



FORM 1
PAINT SAMPLING FORM

Installation: _____ POC: _____

Address: _____ City: _____ State: _____ Housing Group: _____
Date/Time Date/Time
Cleanup Completed: _____ Inspection Initiated: _____

Sample ID #	Room Name and Number	Component	Sub-strate	Paint Color	Paint Condition	Test Location	Result	Units	Above Action Level? (yes or no)

Total number of samples on this page: _____
Date/Time of sample collection: _____ Date sent to lab: _____

(Note: Attach a Copy of the Chain-of-Custody Form to this Form. See Lab Report for QA/QC Information.)

NOTES:

_____

Name of Inspector (print): _____

Certification Number(s): _____
(EPA, State, as applicable)

Signature: _____ Date: _____

Figure B-1: Paint Sampling Form

FORM 2 EP 1110-1-30
LEAD SOIL SAMPLING FORM 31 Aug 01
(Composite Sampling)

Installation: _____ POC: _____

Address: _____ City: _____ State: _____ Housing Group: _____

Date Inspected: _____ Dwelling Selection Protocol: _____

Sketch a soil sampling plot plan. Indicate sample locations. Collect only the top 1 inch of soil.

Sample ID#	**Location**	**Bare or Covered**	**Lab Results**	**Units**	**High Contact? (yes or no)**
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	
				µg/g (ppm)	

Total number of samples on this page: _____

Date/Time of sample collection: _____ Date sent to lab: _____

(Note: Attach a Copy of the Chain-of-Custody Form to this Form. See Lab Report for QA/QC Information.)

NOTES:

_____

Name of Inspector (print): _____

Certification Number(s): _____
(EPA, State, as applicable)

Signature: _____ Date: _____

Figure B-2: Lead Soil Sampling Form

EP 1110-1-30 FORM 3

31 Aug 01 ASBESTOS SAMPLING FORM

Installation: _____ POC: _____

Address: _____ City: _____ State: _____ Housing Group: _____

Date Inspected: _____ Dwelling Selection Protocol: _____

Sample ID #	HA #	Material Location	Sample Location	Quantiy	Type of ACBM	Friability	Physical Condition	Potential for Disturbance

(Note: Attach a Copy of the Chain-of-Custody Form to this Form. See Lab Report for QA/QC Information.)

NOTES:

_____

Name of Inspector (print): _____

Certification Number(s): _____
(EPA, State, as applicable)

Signature: _____ Date: _____

Figure B-3: Asbestos Sampling Form B-10

EXAMPLE CHAIN OF CUSTODY FORM 31 Aug 01

Page _____ of _____

Project Name _____ Project Number _____

Installation _____

Project Manager _____

Company Name _____

Company Address _____

_____ Phone _____

Sample Preparation/Analysis Required (check the appropriate box)

Sample ID	Sample Date	Time	Sample Matrix (wipe, paint chip, soil, other)	Laboratory ID	ASTM E1644	ASTM E1645	ASTM E1726	ASTM E1979	ASTM E1613	Other (specify)

Sampler:

_____

Signature

_____

Printed Name/Certification Number

_____

Company Name

_____

Date/Time

1. Released by:

_____

Signature

_____

Printed Name

_____

Company Name

_____

Date/Time

2. Received by:

_____

Signature

_____

Printed Name

_____

Company Name

_____

Date/Time

Special Instructions/Comments:

Figure B-4: Example Chain of Custody Form

FORM 5

PRE-DESIGN LEAD/ASBESTOS SURVEY

ASBESTOS DATA SUMMARY SHEET

1. Sample Number : _____
2. Sample Location: _____
3. Brief Description of Material Sampled: (See Table B-3)

   a. Type of Asbestos _____

   b. Percent Asbestos Content _____

4. EPA NESHAP Friability Designation for Work Task

   Friable _____ Non-Friable Category I _____ Non-Friable Category II _____

5. Condition of ACM: Good _____ Fair _____ Poor _____

6. Quantity: Meters _____, Square Meters _____

7. Quantity: Linear Feet: _____, Square Feet _____

Figure B-5: Example Asbestos Data Summary Sheet