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NAS KEY WEST
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LEAD AND ASBESTOS SURVEY OF HAWK MISSILE SITE NAS KEY WEST FL
5/22/1995
NAVY PUBLIC WORKS CENTER

0043

LEAD AND ASBESTOS SURVEY
OF
HAWK MISSILE SITE
NVSTA KEY WEST, FLORIDA

6/6

INSPECTION PERFORMED BY
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

MAY 22, 1995

TABLE OF CONTENTS

HAWK MISSILE SITE

<u>BUILDING</u>	<u>DRAWING #</u>	<u>DESCRIPTION</u>
1 READY BUILDING	Y & D DWG # 1022167	VA ADMIN BLDG
2 MISSILE SERVICE BUILDING	Y & D DWG # 1022167	UTILITY
3 MISSILE SHELTER BUILDING	Y & D DWG # 1022167	UTILITY
4 GENERATOR BUILDING	Y & D DWG # 1022167	MESS HALL
5 ELECTRIC SUB-STATION	Y & D DWG # 1022167	UTILITY
MISCELLANEOUS	Y & D DWG # 1022167	MISC.



**LEAD AND ASBESTOS SURVEY
OF
BUILDING 1**

**INSPECTION PERFORMED BY
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA**

MAY 22, 1995

1.0 ASBESTOS. This narrative addresses the inspection, findings, conclusions, and lab analyses performed by Code 468, NPWC Pensacola pertaining to suspect asbestos-containing-material (ACM) in subject buildings.

1.1 All asbestos inspection and sampling was performed by EPA trained and certified asbestos inspectors.

1.2 This table contains a listing of all Asbestos-Containing-Material (ACM) and those materials that were assumed to contain asbestos in the subject building. Material may be assumed positive for asbestos when that material has previously tested positive for the presence of asbestos or the material is inaccessible by typical sampling techniques.

HOMOGENEOUS AREA/MATERIAL	LOCATION	APPROX. QUANTITY	CONDITION FRIABILITY CONTACT
BUILDING 1			
HOMO A/ 9"x9" BLACK FLOOR TILE	DAY ROOM	200 ft ²	GOOD NON HIGH
HOMO B/ 9"x9" GREY FLOOR TILE	DAY ROOM	200 ft ²	GOOD NON HIGH
HOMO C/ 9"x9" GREEN FLOOR TILE	DAY ROOM	20 ft ²	FAIR NON HIGH
HOMO D/ 12"x12" GREEN FLOOR TILE	SEE PRINT FOR LOCATIONS	1400 ft ²	GOOD NON HIGH

* FOR LAB ANALYSES OF ASBESTOS SAMPLES SEE APPENDIX A
SEE PRINTS FOR ACM HOMOGENEOUS AREA LOCATIONS.

1.3 DEFINITIONS.

1.3.1 Asbestos Containing Materials (ACM)

Surfacing Materials - ACM sprayed or troweled on surfaces (walls, ceilings,

structural members) for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.

Thermal System Insulation - Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold water systems and heating, ventilation, and air conditioning (HVAC) systems. This includes pipe lagging, pipe wrap, block, batt, and blanket insulation; cement, "muds"; and a variety of other products such as gaskets and ropes.

Miscellaneous Materials - Other, largely nonfriable products and materials such as floor tile, roofing felt, concrete pipe, outdoor siding, and fabrics.

1.3.2 Friable Materials - Material that, when dry, may be crumbled, crushed, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.3 Non-friable Materials - Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.4 Assessment Criteria

1.3.4.1 Surfacing Materials

Poor Condition (Significantly damaged) - ACM with one or more of the following characteristics: The surface crumbling or blistering over at least one tenth of the area if the damage is evenly distributed, or at least one quarter if the damage is localized; large areas of material hanging from the surface, delaminated, or showing adhesive failure; at least one tenth of the surface water stained or heavily gouged, marred or abraded or one quarter if the damage is localized; large accumulation of powder, dust, or debris on surfaces beneath the ceiling or wall.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: up to one tenth of the surface (if the damage is evenly distributed) or up to one quarter of the surface (if the damage is localized) is blistered, crumbling, water stained, or gouged marred or abraded; some accumulation of powder, dust or debris on surfaces beneath the ceiling or wall.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.4.2 Thermal System Insulation

Poor Condition (Significantly Damaged) - ACM with one or more of the following characteristics: mostly missing jackets; water damaged, crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers if the damage is evenly distributed, or at least one quarter if the damage is localized; powder, dust and debris on surfaces beneath pipes,

boilers, tanks, etc.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: a few water stains or sections of missing jackets; crushed insulation or water stains, gouges, punctures, or mars on up to one tenth of the insulation if the damage is evenly distributed, or up to one quarter if the damage is localized; some accumulation of powder, dust, debris on surfaces beneath pipes, boilers, tanks, etc.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.5 Homogeneous Area - An application of ACM which is uniform in color and texture and appears identical in every respect.

1.3.6 Potential for Contact with the Material

High - Service workers work in the vicinity of the material more than once a week, or the material is in a public area and accessible to building occupants.

Moderate - Service workers work in the vicinity of the material once per month to once per week or the material is in a room or office and accessible to the occupants.

Low - Service workers work in the vicinity of the material less than once per month or the material is visible but not within reach of building occupants.

1.4 Asbestos Containing Material (ACM) Management - The purpose of this survey is to identify Asbestos Containing Materials. It is not to be construed as an Asbestos Management Plan (AMP); however, the following recommendations should be observed when working around ACM to minimize potential health hazards:

1.4.1 Training - Provide two hour asbestos awareness training for custodial and maintenance staff. This training should also be provided on a voluntary basis for any other staff and for building occupants.

1.4.2 Minor Release Episode - A minor release is defined as less than 3 square feet/linear feet of ACM becoming dislodged or falling. Minor release control can be performed by the Facility Coordinator or building maintenance personnel upon having completed 15 hours (two hours "Asbestos Awareness" training and an additional training). If this option is not exercised, the response shall be to restrict the area, restrict air movement in the area, and contact key asbestos abatement personnel. The following actions shall be used;

Restrict entry into the area by persons other than those necessary to perform the maintenance project.

Post signs necessary to prevent entry by unauthorized persons.



Inhibit the spread of any released fibers by thoroughly saturating the debris with wet methods.

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

- (1) The area has been visually inspected and found fiber free , and aggressive sampling performed.
- (2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.3 Major Release Episode - A major release is defined as any falling or dislodging of friable ACM, greater than 3 square feet/linear feet. Only key asbestos abatement personnel may perform abatement. The following actions shall be taken immediately:

Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

Post signs necessary to prevent entry by unauthorized persons.

Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

Use work practices or other controls to inhibit the spread of any released fibers;

wet-methods- thoroughly saturate the debris
protective clothing
HEPA-vacuums
mini-enclosures
glove bags

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

- (1) The area has been visually inspected and found fiber free , and aggressive sampling performed.
- (2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.4 Maintenance Work (Operating and Controls for Maintaining Asbestos Floor Tile) The EPA recommends that building owners and custodial/maintenance staff consider the following basic guidelines when stripping wax or finish coat from asbestos-containing floor tile:

1. Avoid stripping floors. Stripping floors should be done as infrequently as possible - perhaps once or twice a year or less depending on circumstances. The frequency should be carefully considered as floor maintenance schedules or contracts are written or renewed.
2. Properly train staff. Custodial or maintenance staff who strip floors should be trained



to operate properly and safely the machines, pads, and floor care chemicals used at the facility.

3. Follow appropriate work practices. Custodial or maintenance staff who strip floors should follow appropriate work practices, such as those recommended here, under informed supervision. Directions from floor tile and floor wax product manufacturers on proper maintenance procedures should be consulted.

4. Strip floors while wet. The floor should be kept adequately wet during the stripping operation. Do NOT perform dry stripping. Prior to machine operation, an emulsion of chemical stripper in water is commonly applied to the floor with a mop to soften the wax or finish coat. After the stripping and before application of the new wax, the floor should be thoroughly cleaned, while wet.

5. Run machine at slow speed. If the machine used to remove wax or finish coat has variable speeds, it should be run at slow speed (about 175-190 rpm) during stripping operation.

6. Select the least abrasive pad possible. EPA recommends the machine be equipped with the least abrasive pad possible to strip wax or finish coat from the asbestos-containing floors.

7. Do not overstrip floors. Stop stripping when the old surface coat is removed. Overstripping can damage the floor and may cause the release of asbestos fibers. Do NOT operate a floor machine with an abrasive pad on unwaxed or unfinished floor.

2.0 LEAD. This narrative addresses the inspection, findings, conclusions, and data accumulated by Code 468, NPWC Pensacola during lead-based-paint and soil surveys of subject buildings and grounds.

2.1 All LBP inspections were performed by EPA trained and certified inspectors.

2.2 Scope of Work

LBP Survey consisted of the following:

Step 1 - Preliminary walkthrough and thorough inspection of all accessible interior and exterior areas of selected representative building components for the purpose of locating and documenting surfaces coated with suspected LBP.

Step 2 - Development and implementation of a testing protocol for all suspect LBPs.

Step 3 - Performance of quality-assured XRF testing of all accessible and suspect surface coatings that are located both on interior and exterior areas of subject buildings.

Step 4 - Preparation and submission of this report which includes:

- a. Tables of all tested homogeneous surfaces coated with suspected LBP;
- b. Hazard/Materials assessment;
- c. Conclusions and recommendations; and
- d. Results of field tests.

2.3 INSPECTION AND TESTING METHODS

2.31 Inspection

The Lead-Based Paint (LBP) inspection process consists of a complete visual inspection of both interior and exterior accessible building surfaces for the presence of paints suspected of containing lead. Based on on-site observations, representative building components surfaced with homogeneous suspect paint were selected for X-Ray Fluorescence (XRF) testing.

2.32 Testing Equipment

Inspections to determine the presence of lead in paint were accomplished by using a MAP Spectrum Analyzer (XRF) manufactured by Scitec Corporation. Calibration checks using ANSI standard (paint films and painted wood block with known lead quantities) were taken at regular intervals for Quality Assurance. The MAP XRF Spectrum Analyzer operational specifications are listed in Appendix B.

2.4 SUMMARY OF FINDINGS

As a result of this inspection, the following building components found interior or exterior to building 1 were identified to be surfaced with paint that contains lead in excess of the standards set by the Lead-Based Paint Poison Prevention Act, Section 302, and Department of Housing and Urban Development (HUD) Guidelines for Hazard Identification and Abatement in Public and Indian Housing revised September 1990 and May 1991.

Building 1

Exterior:	1. POOR CONDITION, WHITE, WOOD, SOFFIT	2.8 mg/cm ²
	2. POOR CONDITION, WHITE, WOOD, FASCIA	2.6 mg/cm ²
	3. POOR CONDITION, YELLOW, ASPHALT, STRIPING	19.1
	4. POOR CONDITION, WHITE, METAL, FUEL TANK	1.7
Interior:	5. FAIR CONDITION, WHITE, WOOD, DOOR	2.5



6. FAIR CONDITION, BLUE, CONCRETE, WALL	3.4
7. FAIR CONDITION, WHITE, WOOD, DOOR JAMB	1.8
8. POOR CONDITION, BLACK, WOOD, DOOR JAMB	1.5
	(TEST)
9. POOR CONDITION, BLUE, CONCRETE, LOWER WALL	1.8
10. POOR CONDITION, BLACK, CONCRETE, BASEBOARD	1.7
	(TEST)

2.5 CONCLUSIONS AND RECOMMENDATIONS

As a result of the inspections for LBP in building 1, code 468, Public Works Center, NAS Pensacola provides the following conclusions and recommendations.

1. Lead-based paint was found to be present as a result of this inspection in building 1 as listed in section 2.4. All data collected with assay numbers, locations, paint conditions, substrates, components, and associated results (where conclusive) are listed in APPENDIX C (XRF Data Sheets).
2. Sample values greater than 1.6 mg/cm² on a screen setting (1.3 mg/cm² on test setting) were considered positive for containing lead. Values less than or equal to 1.6 mg/cm² on a screen setting (1.3 mg/cm² on a test setting) were considered inconclusive due to the operating parameters of the MAP Spectrum Analyzer (refer to operating specifications in APPENDIX B). Paint chip sampling and lab analyses is recommended for those assays found to be inconclusive.
3. Lead-based-paint abatement strategies (paint removal, or LBP painted component removal) should be scheduled when building undergoes renovation or demolition.
4. Those building components containing LBP assessed as in good condition may be managed in-place (encapsulation or enclosure). Removal is recommended if LBP components are disturbed during renovations or demolition.

Poor Condition? What to do?

3.0 LEAD IN SOIL. This narrative addresses the sampling, findings, conclusions, and lab analysis performed by Code 468, NPWC Pensacola pertaining to soil sampling to determine level (if any) of lead contamination. This effort focused on soil around foundations of subject buildings and associated grounds.

3.1 All soil sampling was performed by EPA trained and certified LBP inspectors.

3.2 Federal standards have not been set for lead in soil. Although a standard soil lead action level does not exist, most authorities agree that residential soil lead levels should not exceed 500

parts per million (ppm).

SAMPLE #/ LOCATION	PERCENT SOIL EXPOSED	RESULTS OF ANALYSES (PPM)
BUILDING 1		
SEE HAWK MISSILE SITE MISCELLANEOUS		

* FOR LAB ANALYSES OF SOIL SAMPLES SEE APPENDIX D



**APPENDIX A
LAB ANALYSES OF ASBESTOS
SAMPLES**



Departmental Approval

Accession: 505045
Client: US NAVY PUBLIC WORKS CENTER
Project Number: 1026002
Project Name: U.S. NAVAL AIR STATION, V.V.A. ADMINISTRATION BUILDING
Project Location: KEY WEST, FL

Department: INDUSTRIAL HYGIENE
Supervisor: Austin M. Crow

This data package has been reviewed and approved by:

Austin M. Crow Date: 5 MAY 95

Analyzed by: Suzanne J. Wdowick



Accession: 505045
 Client: US NAVY PUBLIC WORKS CENTER
 Project Number: 1026002
 Project Name: U.S. NAVAL AIR STATION, V.V.A. ADMINISTRATION BUILDING
 Project Location: KEY WEST, FL
 Test: TOTAL FIBROUS ASBESTOS (%)
 Matrix: BULK

Lab Id	Sample Date	Analysis Date	Client Sample Id					
001	27-MAR-95	N/S	02-MAY-95	1001				
002	27-MAR-95	N/S	02-MAY-95	1001				
003	27-MAR-95	N/S	02-MAY-95	1002				
004	27-MAR-95	N/S	02-MAY-95	1002				
005	27-MAR-95	N/S	02-MAY-95	1003				
Components				Laboratory Id: 001	002	003	004	005
CHRYBOTILE ASBESTOS (%)				2	5	3	10	15
TOTAL FIBROUS ASBESTOS (%)				2	5	3	10	15
TILE COMPONENTS (%)				98		97		85
MASTIC (%)					95		90	
UNIFORMITY				U	U	U	U	U
SAMPLE COLOR.				G	B	G	B	GR



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 Project Location: KEY WEST, FL
 Test: TOTAL FIBROUS ASBESTOS (%)
 Matrix: BULK

Lab Id	Sample Date	Analysis Date	Client Sample Id
006	27-MAR-95	N/S	02-MAY-95 1003
007	27-MAR-95	N/S	02-MAY-95 1004
008	27-MAR-95	N/S	02-MAY-95 1004
009	27-MAR-95	N/S	02-MAY-95 1005
010	27-MAR-95	N/S	02-MAY-95 1006

Components	Laboratory Id: 006	007	008	009	010
CHRYBOTILE ASBESTOS (%)	20	3	10	<1	
TOTAL FIBROUS ASBESTOS (%)	20	3	10	<1	ND

GLASS FIBERS (%)				34	
CELLULOSE FIBERS (%)					67
PLASTIC FIBERS (%)					3
MASTIC (%)	80		90		
TILE COMPONENTS (%)		97			
MORTAR/PLASTER (%)				65	
TAR (%)					30

UNIFORMITY	U	U	U	L	U
SAMPLE COLOR.	B	GR	B	W	B
SAMPLE COLOR..		W		W	
SAMPLE COLOR...		S			

Remarks:

009 ASBESTOS WAS LOCATED IN A FRAGMENT OF FIBERGLASS INSULATION THAT WAS PRESSED TO THE WHITE FIBROUS MORTAR/PLASTER.

Accession: 505045
Client: US NAVY PUBLIC WORKS CENTER
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Project Name: U.S. NAVAL AIR STATION, V.V.A. ADMINISTRATION BUILDING
Project Location: KEY WEST, FL
Test: TOTAL FIBROUS ASBESTOS (%)
Matrix: BULK

Lab Id	Sample Date	Analysis Date	Client Sample Id
011	27-MAR-95 N/S	02-MAY-95	1007

Components Laboratory Id: 011

TOTAL FIBROUS ASBESTOS (%) ND

CELLULOSE FIBERS (%) 90
GLASS FIBERS (%) <1
MISCELLANEOUS DEBRIS (%) 9

UNIFORMITY L
SAMPLE COLOR. BR
SAMPLE COLOR.. T

Sample of what?

SUPPLEMENTARY INFORMATION

SAMPLE TYPE: BULK

Analyses are performed using polarized light microscopy and dispersion staining according to the U.S. EPA's Interim Method for the Determination of Asbestos in Bulk Insulation Samples (EPA-600/M4-82-020, 1982). Volumetric percentages are determined by visual estimation. Sample colors determined by the analyst may be different from those observed by the sample collector at the collection site, due to differences in lighting.

LEGEND:

N/S = Not Submitted ND = Not Detected
U = Uniform L = Layered N = Nonuniform nonlayered
B = Black BG = Beige BL = Blue BR = Brown CO = Copper G = Gray
GL = Gold GR = Green I = Ivory MG = Magenta MR = Maroon MV = Mauve
O = Orange OL = Olive P = Pink PR = Purple R = Red SL = Silver
T = Tan TP = Taupe V = Violet W = White Y = Yellow C = Clear
OP = Opaque TR = Translucent S = Streaked SP = Spotted M = Multi-colored
MO = Mottled UA = Unable to Ascertain D = Dirty or discolored
(Note: "L" preceding a color abbreviation indicates "Light", "D" indicates "Dark". For example, LG = Light Gray, DBR = Dark Brown. If two color abbreviations are combined, the first is to be read as the adjective form. For example, RBR = Reddish Brown, BLGR = Bluish Green, YT = Yellowish Tan.)

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 Project Number: 1026002
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 Project Location: KEY WEST, FL
 Test: TOTAL FIBROUS ASBESTOS (%)
 Matrix: BULK

Lab Id	Sample Date	Analysis Date	Client Sample Id
001	27-MAR-95 N/S	02-MAY-95	1001
002	27-MAR-95 N/S	02-MAY-95	1001
003	27-MAR-95 N/S	02-MAY-95	1002
004	27-MAR-95 N/S	02-MAY-95	1002
005	27-MAR-95 N/S	02-MAY-95	1003

Physical Description

- 001
- 002
- 003
- 004
- 005

Asbestos	Morphology	Color	Extn	SOE	Plchrc	App Ref Ind Paral Perp	Bir
CHRYBOTILE ASBESTOS (%)	WAVY	WHITE	P	+	NO	1.55 1.54	MEDIUM

Extn = Extinction
 SOE = Signs of Elongation
 Plchrc = Pleiochroic
 App Ref Ind = Approximate Refractive Index
 Paral = Parallel
 Perp = Perpendicular
 Bir = Birefringence

*Blank
 What is this?*



Accession: 505045
 Client: US NAVY PUBLIC WORKS CENTER
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006	27-MAR-95 N/S	02-MAY-95	1003
007	27-MAR-95 N/S	02-MAY-95	1004
008	27-MAR-95 N/S	02-MAY-95	1004
009	27-MAR-95 N/S	02-MAY-95	1005
010	27-MAR-95 N/S	02-MAY-95	1006

Physical Description

- 006
- 007
- 008
- 009
- 010

Asbestos	Morphology	Color	Extn	SOE	Plchrc	App Ref Ind Paral Perp	Bir
CHRYBOTILE ASBESTOS (%)	WAVY	WHITE	P	+	NO	1.55 1.54	MEDIUM

Extn = Extinction
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Blank

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Test: TOTAL FIBROUS ASBESTOS (%)
Matrix: BULK

Lab Id	Sample Date	Analysis Date	Client Sample Id
011	27-MAR-95 N/S	02-MAY-95	1007

Physical Description

011

Asbestos Morphology Color Extn SOE Plchrc App Ref Ind Bir
Paral Perp

Extn = Extinction
SOE = Signs of Elongation
Plchrc = Pleiochroic
App Ref Ind = Approximate Refractive Index
Paral = Parallel
Perp = Perpendicular
Bir = Birefringence

Blank?



APPENDIX B
OPERATIONAL SPECIFICATIONS



**MAP XRF SPECTRUM ANALYZER
OPERATIONAL SPECIFICATIONS**

1. Reads from 0.0 to 200.0 mg/square centimeter in increments of 0.1 mg/square centimeter. Inconclusive ranges are:

+/- 0.6 for screen (15+ seconds sample time)

+/- 0.3 for test (60+ seconds sample time)

+/- 0.15 for confirmation (240+ seconds sample time)

2. The software analyzes the complete signal spectrum to determine substrate correction factor.

3. Operating temperature: 20 degrees F to 100 degrees F

4. Radioactive Source: 40 millicuries Cobalt -57 isotope

5. Weight: console (9 lb) scanner (3.5 lb)



APPENDIX C
XRF DATA SHEETS



BUILDING 1

XRF DATA SHEET

DATE:03/21/95

Assay #	Substrate	Paint Condition	Location	Wall Number	Component	Color	Type	K-Shell mg/cm ²
=====	=====	=====	=====	=====	=====	=====	=====	=====
15	WOOD	FAIR	OFFICER'S ROOM	2	DOOR	WHITE	SCREEN	2.5
17	CONCRETE	FAIR	HALL 1	1	WALL	BLUE	SCREEN	3.4
19	WOOD	FAIR	HALL 1	2	DOOR JAMB	WHITE	SCREEN	1.8
30	WOOD	POOR	BATHROOM	2	DOOR JAMB	BLACK	TEST	1.5
31	CONCRETE	POOR	BATHROOM	2	LOWER WALL	BLUE	SCREEN	1.8
35	CONCRETE	POOR	BATHROOM	1	BASEBOARD	BLACK	TEST	1.7
39	WOOD	POOR	EXTERIOR	4	SOFFIT	WHITE	SCREEN	2.8
40	WOOD	POOR	EXTERIOR	4	FASCIA	WHITE	SCREEN	2.6
41	ASPHALT	POOR	EXTERIOR	1	STRIPING	YELLOW	SCREEN	19.1
44	METAL	POOR	EXTERIOR	4	FUEL TANK	WHITE	SCREEN	1.7



**APPENDIX D
LAB ANALYSES OF SOIL
SAMPLES**



**LEAD AND ASBESTOS SURVEY
OF
BUILDING 2**

**INSPECTION PERFORMED BY
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA**

MAY 22, 1995

1.0 ASBESTOS. This narrative addresses the inspection, findings, conclusions, and lab analyses performed by Code 468, NPWC Pensacola pertaining to suspect asbestos-containing-material (ACM) in subject buildings.

1.1 All asbestos inspection and sampling was performed by EPA trained and certified asbestos inspectors.

MATERIAL	LOCATION	APPROXIMATE QUANTITY
BUILDING 2		
NO ACM DETECTED	-	-

* FOR LAB ANALYSES OF ASBESTOS SAMPLES SEE APPENDIX A

SEE PRINTS FOR ACM HOMOGENEOUS AREA LOCATIONS.

1.3 DEFINITIONS.

1.3.1 Asbestos Containing Materials (ACM)

Surfacing Materials - ACM sprayed or troweled on surfaces (walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.

Thermal System Insulation - Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold water systems and heating, ventilation, and air conditioning (HVAC) systems. This includes pipe lagging, pipe wrap, block, batt, and blanket insulation; cement, "muds"; and a variety of other products such as gaskets and ropes.

Miscellaneous Materials - Other, largely nonfriable products and materials such as floor tile, roofing felt, concrete pipe, outdoor siding, and fabrics.

1.3.2 Friable Materials - Material that, when dry, may be crumbled, crushed, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

*Why any
of these
pages?*



1.3.3 Non-friable Materials - Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.4 Assessment Criteria

1.3.4.1 Surfacing Materials

Poor Condition (Significantly damaged) - ACM with one or more of the following characteristics: The surface crumbling or blistering over at least one tenth of the area if the damage is evenly distributed, or at least one quarter if the damage is localized; large areas of material hanging from the surface, delaminated, or showing adhesive failure; at least one tenth of the surface water stained or heavily gouged, marred or abraded or one quarter if the damage is localized; large accumulation of powder, dust, or debris on surfaces beneath the ceiling or wall.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: up to one tenth of the surface (if the damage is evenly distributed) or up to one quarter of the surface (if the damage is localized) is blistered, crumbling, water stained, or gouged marred or abraded; some accumulation of powder, dust or debris on surfaces beneath the ceiling or wall.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.4.2 Thermal System Insulation

Poor Condition (Significantly Damaged) - ACM with one or more of the following characteristics: mostly missing jackets; water damaged, crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers if the damage is evenly distributed, or at least one quarter if the damage is localized; powder, dust and debris on surfaces beneath pipes, boilers, tanks, etc.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: a few water stains or sections of missing jackets; crushed insulation or water stains, gouges, punctures, or mars on up to one tenth of the insulation if the damage is evenly distributed, or up to one quarter if the damage is localized; some accumulation of powder, dust, debris on surfaces beneath pipes, boilers, tanks, etc.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.5 Homogeneous Area - An application of ACM which is uniform in color and texture and appears identical in every respect.

1.3.6 Potential for Contact with the Material

High - Service workers work in the vicinity of the material more than once a week, or the

material is in a public area and accessible to building occupants.

Moderate - Service workers work in the vicinity of the material once per month to once per week or the material is in a room or office and accessible to the occupants.

Low - Service workers work in the vicinity of the material less than once per month or the material is visible but not within reach of building occupants.

1.4 Asbestos Containing Material (ACM) Management - The purpose of this survey is to identify Asbestos Containing Materials. It is not to be construed as an Asbestos Management Plan (AMP); however, the following recommendations should be observed when working around ACM to minimize potential health hazards:

1.4.1 Training - Provide two hour asbestos awareness training for custodial and maintenance staff. This training should also be provided on a voluntary basis for any other staff and for building occupants.

1.4.2 Minor Release Episode - A minor release is defined as less than 3 square feet/linear feet of ACM becoming dislodged or falling. Minor release control can be performed by the Facility Coordinator or building maintenance personnel upon having completed 15 hours (two hours "Asbestos Awareness" training and an additional training). If this option is not exercised, the response shall be to restrict the area, restrict air movement in the area, and contact key asbestos abatement personnel. The following actions shall be used;

Restrict entry into the area by persons other than those necessary to perform the maintenance project.

Post signs necessary to prevent entry by unauthorized persons.

Inhibit the spread of any released fibers by thoroughly saturating the debris with wet methods.

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated



(1) The area has been visually inspected and found fiber free , and aggressive sampling performed.

(2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.3 Major Release Episode - A major release is defined as any falling or dislodging of friable ACM, greater than 3 square feet/linear feet. Only key asbestos abatement personnel may perform abatement. The following actions shall be taken immediately:

Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

Post signs necessary to prevent entry by unauthorized persons.

Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

Use work practices or other controls to inhibit the spread of any released fibers;

- wet-methods- thoroughly saturate the debris
- protective clothing
- HEPA-vacuums
- mini-enclosures
- glove bags

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.



No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

- (1) The area has been visually inspected and found fiber free , and aggressive sampling performed.
- (2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.4 Maintenance Work (Operating and Controls for Maintaining Asbestos Floor Tile) The EPA recommends that building owners and custodial/maintenance staff consider the following basic guidelines when stripping wax or finish coat from asbestos-containing floor tile:

1. Avoid stripping floors. Stripping floors should be done as infrequently as possible - perhaps once or twice a year or less depending on circumstances. The frequency should be carefully considered as floor maintenance schedules or contracts are written or renewed.
2. Properly train staff. Custodial or maintenance staff who strip floors should be trained to operate properly and safely the machines, pads, and floor care chemicals used at the facility.
3. Follow appropriate work practices. Custodial or maintenance staff who strip floors should follow appropriate work practices, such as those recommended here, under informed supervision. Directions from floor tile and floor wax product manufacturers on proper maintenance procedures should be consulted.
4. Strip floors while wet. The floor should be kept adequately wet during the stripping operation. Do NOT perform dry stripping. Prior to machine operation, an emulsion of chemical stripper in water is commonly applied to the floor with a mop to soften the wax or finish coat. After the stripping and before application of the new wax, the floor should be thoroughly cleaned, while wet.
5. Run machine at slow speed. If the machine used to remove wax or finish coat has variable speeds, it should be run at slow speed (about 175-190 rpm) during stripping



operation.

6. Select the least abrasive pad possible. EPA recommends the machine be equipped with the least abrasive pad possible to strip wax or finish coat from the asbestos-containing floors.

7. Do not overstrip floors. Stop stripping when the old surface coat is removed. Overstripping can damage the floor and may cause the release of asbestos fibers. Do NOT operate a floor machine with an abrasive pad on unwaxed or unfinished floor.

2.0 LEAD. This narrative addresses the inspection, findings, conclusions, and data accumulated by Code 468, NPWC Pensacola during lead-based-paint and soil surveys of subject buildings and grounds.

2.1 All LBP inspections were performed by EPA trained and certified inspectors.

2.2 Scope of Work

LBP Survey consisted of the following:

Step 1 - Preliminary walkthrough and thorough inspection of all accessible interior and exterior areas of selected representative building components for the purpose of locating and documenting surfaces coated with suspected LBP.

Step 2 - Development and implementation of a testing protocol for all suspect LBPs.

Step 3 - Performance of quality-assured XRF testing of all accessible and suspect surface coatings that are located both on interior and exterior areas of subject buildings.

Step 4 - Preparation and submission of this report which includes:

- a. Tables of all tested homogeneous surfaces coated with suspected LBP;
- b. Hazard/Materials assessment;
- c. Conclusions and recommendations; and
- d. Results of field tests.

2.3 INSPECTION AND TESTING METHODS

2.31 Inspection

The Lead-Based Paint (LBP) inspection process consists of a complete visual inspection of both interior and exterior accessible building surfaces for the presence of paints suspected of

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containing lead. Based on on-site observations, representative building components surfaced with homogeneous suspect paint were selected for X-Ray Fluorescence (XRF) testing.

2.32 Testing Equipment

Inspections to determine the presence of lead in paint were accomplished by using a MAP Spectrum Analyzer (XRF) manufactured by Scitec Corporation. Calibration checks using ANSI standard (paint films and painted wood block with known lead quantities) were taken at regular intervals for Quality Assurance. The MAP XRF Spectrum Analyzer operational specifications are listed in Appendix B.

2.4 SUMMARY OF FINDINGS

As a result of this inspection, the following building components found interior or exterior to building 2 were identified to be surfaced with paint that contains lead in excess of the standards set by the Lead-Based Paint Poison Prevention Act, Section 302, and Department of Housing and Urban Development (HUD) Guidelines for Hazard Identification and Abatement in Public and Indian Housing revised September 1990 and May 1991.

Building 2

Exterior: NONE

Interior: NONE

2.5 CONCLUSIONS AND RECOMMENDATIONS

As a result of the inspections for LBP in building 2, code 468, Public Works Center, NAS Pensacola provides the following conclusions and recommendations.

1. No Lead-based paint was found to be present as a result of this inspection in building 2 as listed in section 2.4. All data collected with assay numbers, locations, paint conditions, substrates, components, and associated results (where conclusive) are listed in APPENDIX C (XRF Data Sheets).
2. Sample values greater than 1.6 mg/cm² on a screen setting (1.3 mg/cm² on test setting) were considered positive for containing lead. Values less than or equal to 1.6 mg/cm² on a screen setting (1.3 mg/cm² on a test setting) were considered inconclusive due to the operating parameters of the MAP Spectrum Analyzer (refer to operating specifications in APPENDIX B). Paint chip sampling and lab analyses is recommended for those assays

found to be inconclusive.

3. Lead-based-paint abatement strategies (paint removal, or LBP painted component removal) should be scheduled when building undergoes renovation or demolition.
4. Those building components containing LBP assessed as in good condition may be managed in-place (encapsulation or enclosure). Removal is recommended if LBP components are disturbed during renovations or demolition.

3.0 LEAD IN SOIL. This narrative addresses the sampling, findings, conclusions, and lab analysis performed by Code 468, NPWC Pensacola pertaining to soil sampling to determine level (if any) of lead contamination. This effort focused on soil around foundations of subject buildings and associated grounds.

3.1 All soil sampling was performed by EPA trained and certified LBP inspectors.

3.2 Federal standards have not been set for lead in soil. Although a standard soil lead action level does not exist, most authorities agree that residential soil lead levels should not exceed 500 parts per million (ppm).

SAMPLE #/ LOCATION	PERCENT SOIL EXPOSED	RESULTS OF ANALYSES (PPM)
BUILDING 2		
SEE HAWK MISSILE SITE MISCELLANEOUS		

* FOR LAB ANALYSES OF SOIL SAMPLES SEE APPENDIX D



**APPENDIX A
LAB ANALYSES OF ASBESTOS
SAMPLES**



APPENDIX B OPERATIONAL SPECIFICATIONS



**MAP XRF SPECTRUM ANALYZER
OPERATIONAL SPECIFICATIONS**

1. Reads from 0.0 to 200.0 mg/square centimeter in increments of 0.1 mg/square centimeter. Inconclusive ranges are:
 - +/- 0.6 for screen (15+ seconds sample time)
 - +/- 0.3 for test (60+ seconds sample time)
 - +/- 0.15 for confirmation (240+ seconds sample time)
2. The software analyzes the complete signal spectrum to determine substrate correction factor.
3. Operating temperature: 20 degrees F to 100 degrees F
4. Radioactive Source: 40 millicuries Cobalt -57 isotope
5. Weight: console (9 lb) scanner (3.5 lb)



APPENDIX C
XRF DATA SHEETS

**APPENDIX D
LAB ANALYSES OF SOIL
SAMPLES**



**LEAD AND ASBESTOS SURVEY
OF
BUILDING 3**

**INSPECTION PERFORMED BY
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA**

MAY 22, 1995

1.0 ASBESTOS. This narrative addresses the inspection, findings, conclusions, and lab analyses performed by Code 468, NPWC Pensacola pertaining to suspect asbestos-containing-material (ACM) in subject buildings.

1.1 All asbestos inspection and sampling was performed by EPA trained and certified asbestos inspectors.

1.2 This table contains a listing of all Asbestos-Containing-Material (ACM) and those materials that were assumed to contain asbestos in the subject building. Material may be assumed positive for asbestos when that material has previously tested positive for the presence of asbestos or the material is inaccessible by typical sampling techniques.

HOMOGENEOUS AREA/MATERIAL	LOCATION	APPROX. QUANTITY	CONDITION FRIABILITY CONTACT
BUILDING 2			
NO ACM DETECTED	-	-	-

* FOR LAB ANALYSES OF ASBESTOS SAMPLES SEE APPENDIX A

SEE PRINTS FOR ACM HOMOGENEOUS AREA LOCATIONS.

1.3 DEFINITIONS.

1.3.1 Asbestos Containing Materials (ACM)

Surfacing Materials - ACM sprayed or troweled on surfaces (walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.

Thermal System Insulation - Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold water systems and heating, ventilation, and air conditioning (HVAC) systems. This includes pipe lagging, pipe wrap, block, batt, and blanket insulation; cement, "muds"; and a variety of other products such as gaskets and ropes.

Miscellaneous Materials - Other, largely nonfriable products and materials such as floor tile, roofing felt, concrete pipe, outdoor siding, and fabrics.



1.3.2 Friable Materials - Material that, when dry, may be crumbled, crushed, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.3 Non-friable Materials - Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.4 Assessment Criteria

1.3.4.1 Surfacing Materials

Poor Condition (Significantly damaged) - ACM with one or more of the following characteristics: The surface crumbling or blistering over at least one tenth of the area if the damage is evenly distributed, or at least one quarter if the damage is localized; large areas of material hanging from the surface, delaminated, or showing adhesive failure; at least one tenth of the surface water stained or heavily gouged, marred or abraded or one quarter if the damage is localized; large accumulation of powder, dust, or debris on surfaces beneath the ceiling or wall.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: up to one tenth of the surface (if the damage is evenly distributed) or up to one quarter of the surface (if the damage is localized) is blistered, crumbling, water stained, or gouged marred or abraded; some accumulation of powder, dust or debris on surfaces beneath the ceiling or wall.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.4.2 Thermal System Insulation

Poor Condition (Significantly Damaged) - ACM with one or more of the following characteristics: mostly missing jackets; water damaged, crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers if the damage is evenly distributed, or at least one quarter if the damage is localized; powder, dust and debris on surfaces beneath pipes, boilers, tanks, etc.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: a few water stains or sections of missing jackets; crushed insulation or water stains, gouges, punctures, or mars on up to one tenth of the insulation if the damage is evenly distributed, or up to one quarter if the damage is localized; some accumulation of powder, dust, debris on surfaces beneath pipes, boilers, tanks, etc.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.5 Homogeneous Area - An application of ACM which is uniform in color and texture and

appears identical in every respect.

1.3.6 Potential for Contact with the Material

High - Service workers work in the vicinity of the material more than once a week, or the material is in a public area and accessible to building occupants.

Moderate - Service workers work in the vicinity of the material once per month to once per week or the material is in a room or office and accessible to the occupants.

Low - Service workers work in the vicinity of the material less than once per month or the material is visible but not within reach of building occupants.

1.4 Asbestos Containing Material (ACM) Management - The purpose of this survey is to identify Asbestos Containing Materials. It is not to be construed as an Asbestos Management Plan (AMP); however, the following recommendations should be observed when working around ACM to minimize potential health hazards:

1.4.1 Training - Provide two hour asbestos awareness training for custodial and maintenance staff. This training should also be provided on a voluntary basis for any other staff and for building occupants.

1.4.2 Minor Release Episode - A minor release is defined as less than 3 square feet/linear feet of ACM becoming dislodged or falling. Minor release control can be performed by the Facility Coordinator or building maintenance personnel upon having completed 15 hours (two hours "Asbestos Awareness" training and an additional training). If this option is not exercised, the response shall be to restrict the area, restrict air movement in the area, and contact key asbestos abatement personnel. The following actions shall be used;

Restrict entry into the area by persons other than those necessary to perform the maintenance project.

Post signs necessary to prevent entry by unauthorized persons.

Inhibit the spread of any released fibers by thoroughly saturating the debris with wet methods.

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or



impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

(1) The area has been visually inspected and found fiber free , and aggressive sampling performed.

(2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.3 Major Release Episode - A major release is defined as any falling or dislodging of friable ACM, greater than 3 square feet/linear feet. Only key asbestos abatement personnel may perform abatement. The following actions shall be taken immediately:

Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

Post signs necessary to prevent entry by unauthorized persons.

Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

Use work practices or other controls to inhibit the spread of any released fibers;

wet-methods- thoroughly saturate the debris

protective clothing

HEPA-vacuums

mini-enclosures

glove bags

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet

methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

- (1) The area has been visually inspected and found fiber free , and aggressive sampling performed.
- (2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.4 Maintenance Work (Operating and Controls for Maintaining Asbestos Floor Tile) The EPA recommends that building owners and custodial/maintenance staff consider the following basic guidelines when stripping wax or finish coat from asbestos-containing floor tile:

1. Avoid stripping floors. Stripping floors should be done as infrequently as possible - perhaps once or twice a year or less depending on circumstances. The frequency should be carefully considered as floor maintenance schedules or contracts are written or renewed.
2. Properly train staff. Custodial or maintenance staff who strip floors should be trained to operate properly and safely the machines, pads, and floor care chemicals used at the facility.
3. Follow appropriate work practices. Custodial or maintenance staff who strip floors should follow appropriate work practices, such as those recommended here, under informed supervision. Directions from floor tile and floor wax product manufacturers on proper maintenance procedures should be consulted.
4. Strip floors while wet. The floor should be kept adequately wet during the stripping operation. Do NOT perform dry stripping. Prior to machine operation, an emulsion of chemical stripper in water is commonly applied to the floor with a mop to soften the wax

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OVERVIEW

or finish coat. After the stripping and before application of the new wax, the floor should be thoroughly cleaned, while wet.

5. Run machine at slow speed. If the machine used to remove wax or finish coat has variable speeds, it should be run at slow speed (about 175-190 rpm) during stripping operation.

6. Select the least abrasive pad possible. EPA recommends the machine be equipped with the least abrasive pad possible to strip wax or finish coat from the asbestos-containing floors.

7. Do not overstrip floors. Stop stripping when the old surface coat is removed. Overstripping can damage the floor and may cause the release of asbestos fibers. Do NOT operate a floor machine with an abrasive pad on unwaxed or unfinished floor.

2.0 LEAD. This narrative addresses the inspection, findings, conclusions, and data accumulated by Code 468, NPWC Pensacola during lead-based-paint and soil surveys of subject buildings and grounds.

2.1 All LBP inspections were performed by EPA trained and certified inspectors.

2.2 Scope of Work

LBP Survey consisted of the following:

Step 1 - Preliminary walkthrough and thorough inspection of all accessible interior and exterior areas of selected representative building components for the purpose of locating and documenting surfaces coated with suspected LBP.

Step 2 - Development and implementation of a testing protocol for all suspect LBPs.

Step 3 - Performance of quality-assured XRF testing of all accessible and suspect surface coatings that are located both on interior and exterior areas of subject buildings.

Step 4 - Preparation and submission of this report which includes:

- a. Tables of all tested homogeneous surfaces coated with suspected LBP;
- b. Hazard/Materials assessment;
- c. Conclusions and recommendations; and
- d. Results of field tests.

2.3 INSPECTION AND TESTING METHODS



2.31 Inspection

The Lead-Based Paint (LBP) inspection process consists of a complete visual inspection of both interior and exterior accessible building surfaces for the presence of paints suspected of containing lead. Based on on-site observations, representative building components surfaced with homogeneous suspect paint were selected for X-Ray Fluorescence (XRF) testing.

2.32 Testing Equipment

Inspections to determine the presence of lead in paint were accomplished by using a MAP Spectrum Analyzer (XRF) manufactured by Scitec Corporation. Calibration checks using ANSI standard (paint films and painted wood block with known lead quantities) were taken at regular intervals for Quality Assurance. The MAP XRF Spectrum Analyzer operational specifications are listed in Appendix B.

2.4 SUMMARY OF FINDINGS

As a result of this inspection, the following building components found interior or exterior to building 3 were identified to be surfaced with paint that contains lead in excess of the standards set by the Lead-Based Paint Poison Prevention Act, Section 302, and Department of Housing and Urban Development (HUD) Guidelines for Hazard Identification and Abatement in Public and Indian Housing revised September 1990 and May 1991.

Building 3

Exterior: NONE

Interior: NONE

2.5 CONCLUSIONS AND RECOMMENDATIONS

As a result of the inspections for LBP in building 3, code 468, Public Works Center, NAS Pensacola provides the following conclusions and recommendations.

1. No Lead-based paint was found to be present as a result of this inspection in building 3 as listed in section 2.4. All data collected with assay numbers, locations, paint conditions, substrates, components, and associated results (where conclusive) are listed in APPENDIX C (XRF Data Sheets).
2. Sample values greater than 1.6 mg/cm² on a screen setting (1.3 mg/cm² on test setting)



were considered positive for containing lead. Values less than or equal to 1.6 mg/cm² on a screen setting (1.3 mg/cm² on a test setting) were considered inconclusive due to the operating parameters of the MAP Spectrum Analyzer (refer to operating specifications in APPENDIX B). Paint chip sampling and lab analyses is recommended for those assays found to be inconclusive.

3. Lead-based-paint abatement strategies (paint removal, or LBP painted component removal) should be scheduled when building undergoes renovation or demolition.
4. Those building components containing LBP assessed as in good condition may be managed in-place (encapsulation or enclosure). Removal is recommended if LBP components are disturbed during renovations or demolition.

3.0 LEAD IN SOIL. This narrative addresses the sampling, findings, conclusions, and lab analysis performed by Code 468, NPWC Pensacola pertaining to soil sampling to determine level (if any) of lead contamination. This effort focused on soil around foundations of subject buildings and associated grounds.

3.1 All soil sampling was performed by EPA trained and certified LBP inspectors.

3.2 Federal standards have not been set for lead in soil. Although a standard soil lead action level does not exist, most authorities agree that residential soil lead levels should not exceed 500 parts per million (ppm).

SAMPLE #/ LOCATION	PERCENT SOIL EXPOSED	RESULTS OF ANALYSES (PPM)
BUILDING 3		
SEE HAWK MISSILE SITE MISCELLANEOUS	-	-

* FOR LAB ANALYSES OF SOIL SAMPLES SEE APPENDIX D



APPENDIX A
LAB ANALYSES OF ASBESTOS
SAMPLES



APPENDIX B
OPERATIONAL SPECIFICATIONS

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MAP XRF SPECTRUM ANALYZER OPERATIONAL SPECIFICATIONS

1. Reads from 0.0 to 200.0 mg/square centimeter in increments of 0.1 mg/square centimeter. Inconclusive ranges are:
 - +/- 0.6 for screen (15+ seconds sample time)
 - +/- 0.3 for test (60+ seconds sample time)
 - +/- 0.15 for confirmation (240+ seconds sample time)
2. The software analyzes the complete signal spectrum to determine substrate correction factor.
3. Operating temperature: 20 degrees F to 100 degrees F
4. Radioactive Source: 40 millicuries Cobalt -57 isotope
5. Weight: console (9 lb) scanner (3.5 lb)



APPENDIX C
XRF DATA SHEETS



**APPENDIX D
LAB ANALYSES OF SOIL
SAMPLES**

**LEAD AND ASBESTOS SURVEY
OF
BUILDING 4**

**INSPECTION PERFORMED BY
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA**

MAY 22, 1995

1.0 ASBESTOS. This narrative addresses the inspection, findings, conclusions, and lab analyses performed by Code 468, NPWC Pensacola pertaining to suspect asbestos-containing-material (ACM) in subject buildings.

1.1 All asbestos inspection and sampling was performed by EPA trained and certified asbestos inspectors.

1.2 This table contains a listing of all Asbestos-Containing-Material (ACM) and those materials that were assumed to contain asbestos in the subject building. Material may be assumed positive for asbestos when that material has previously tested positive for the presence of asbestos or the material is inaccessible by typical sampling techniques.

HOMOGENEOUS AREA/MATERIAL	LOCATION	APPROX. QUANTITY	CONDITION FRIABILITY CONTACT
BUILDING 4			
HOMO H/ BUILT-UP ROOF ASSUMED	ROOF	3000 ft ²	GOOD NON LOW
HOMO I/ ELECTRICAL WIRE ASSUMED	JUNCTION BOX	UNKNOWN	GOOD NON LOW
J/BLACK FLOOR TILE 9" X 9" ASSUMED	MESS HALL	100 ft ²	FAIR NON HIGH
K/GREEN FLOOR TILE 9" X 9" ASSUMED	MESS HALL	100 ft ²	FAIR NON HIGH

* FOR LAB ANALYSES OF ASBESTOS SAMPLES SEE APPENDIX A

SEE PRINTS FOR ACM HOMOGENEOUS AREA LOCATIONS.

1.3 DEFINITIONS.

1.3.1 Asbestos Containing Materials (ACM)

Just report the presence of these suspect ACM. Don't reword the remainder of these pages.



Surfacing Materials - ACM sprayed or troweled on surfaces (walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.

Thermal System Insulation - Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold water systems and heating, ventilation, and air conditioning (HVAC) systems. This includes pipe lagging, pipe wrap, block, batt, and blanket insulation; cement, "muds"; and a variety of other products such as gaskets and ropes.

Miscellaneous Materials - Other, largely nonfriable products and materials such as floor tile, roofing felt, concrete pipe, outdoor siding, and fabrics.

1.3.2 Friable Materials - Material that, when dry, may be crumbled, crushed, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.3 Non-friable Materials - Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.4 Assessment Criteria

1.3.4.1 Surfacing Materials

Poor Condition (Significantly damaged) - ACM with one or more of the following characteristics: The surface crumbling or blistering over at least one tenth of the area if the damage is evenly distributed, or at least one quarter if the damage is localized; large areas of material hanging from the surface, delaminated, or showing adhesive failure; at least one tenth of the surface water stained or heavily gouged, marred or abraded or one quarter if the damage is localized; large accumulation of powder, dust, or debris on surfaces beneath the ceiling or wall.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: up to one tenth of the surface (if the damage is evenly distributed) or up to one quarter of the surface (if the damage is localized) is blistered, crumbling, water stained, or gouged marred or abraded; some accumulation of powder, dust or debris on surfaces beneath the ceiling or wall.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.4.2 Thermal System Insulation

Poor Condition (Significantly Damaged) - ACM with one or more of the following characteristics: mostly missing jackets; water damaged, crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers if the damage is evenly distributed, or at least

one quarter if the damage is localized; powder, dust and debris on surfaces beneath pipes, boilers, tanks, etc.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: a few water stains or sections of missing jackets; crushed insulation or water stains, gouges, punctures, or mars on up to one tenth of the insulation if the damage is evenly distributed, or up to one quarter if the damage is localized; some accumulation of powder, dust, debris on surfaces beneath pipes, boilers, tanks, etc.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.5 Homogeneous Area - An application of ACM which is uniform in color and texture and appears identical in every respect.

1.3.6 Potential for Contact with the Material

High - Service workers work in the vicinity of the material more than once a week, or the material is in a public area and accessible to building occupants.

Moderate - Service workers work in the vicinity of the material once per month to once per week or the material is in a room or office and accessible to the occupants.

Low - Service workers work in the vicinity of the material less than once per month or the material is visible but not within reach of building occupants.

1.4 Asbestos Containing Material (ACM) Management - The purpose of this survey is to identify Asbestos Containing Materials. It is not to be construed as an Asbestos Management Plan (AMP); however, the following recommendations should be observed when working around ACM to minimize potential health hazards:

1.4.1 Training - Provide two hour asbestos awareness training for custodial and maintenance staff. This training should also be provided on a voluntary basis for any other staff and for building occupants.

1.4.2 Minor Release Episode - A minor release is defined as less than 3 square feet/linear feet of ACM becoming dislodged or falling. Minor release control can be performed by the Facility Coordinator or building maintenance personnel upon having completed 15 hours (two hours "Asbestos Awareness" training and an additional training). If this option is not exercised, the response shall be to restrict the area, restrict air movement in the area, and contact key asbestos abatement personnel. The following actions shall be used;

Restrict entry into the area by persons other than those necessary to perform the maintenance project.



Post signs necessary to prevent entry by unauthorized persons.

Inhibit the spread of any released fibers by thoroughly saturating the debris with wet methods.

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

- (1) The area has been visually inspected and found fiber free , and aggressive sampling performed.
- (2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.3 Major Release Episode - A major release is defined as any falling or dislodging of friable ACM, greater than 3 square feet/linear feet. Only key asbestos abatement personnel may perform abatement. The following actions shall be taken immediately:

Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

Post signs necessary to prevent entry by unauthorized persons.

Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

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Use work practices or other controls to inhibit the spread of any released fibers;
wet-methods- thoroughly saturate the debris
protective clothing
HEPA-vacuums
mini-enclosures
glove bags

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

(1) The area has been visually inspected and found fiber free , and aggressive sampling performed.

(2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.4 Maintenance Work (Operating and Controls for Maintaining Asbestos Floor Tile) The EPA recommends that building owners and custodial/maintenance staff consider the following basic guidelines when stripping wax or finish coat from asbestos-containing floor tile:

1. Avoid stripping floors. Stripping floors should be done as infrequently as possible - perhaps once or twice a year or less depending on circumstances. The frequency should be carefully considered as floor maintenance schedules or contracts are written or renewed.

- 
2. Properly train staff. Custodial or maintenance staff who strip floors should be trained to operate properly and safely the machines, pads, and floor care chemicals used at the facility.
 3. Follow appropriate work practices. Custodial or maintenance staff who strip floors should follow appropriate work practices, such as those recommended here, under informed supervision. Directions from floor tile and floor wax product manufacturers on proper maintenance procedures should be consulted.
 4. Strip floors while wet. The floor should be kept adequately wet during the stripping operation. Do NOT perform dry stripping. Prior to machine operation, an emulsion of chemical stripper in water is commonly applied to the floor with a mop to soften the wax or finish coat. After the stripping and before application of the new wax, the floor should be thoroughly cleaned, while wet.
 5. Run machine at slow speed. If the machine used to remove wax or finish coat has variable speeds, it should be run at slow speed (about 175-190 rpm) during stripping operation.
 6. Select the least abrasive pad possible. EPA recommends the machine be equipped with the least abrasive pad possible to strip wax or finish coat from the asbestos-containing floors.
 7. Do not overstrip floors. Stop stripping when the old surface coat is removed. Overstripping can damage the floor and may cause the release of asbestos fibers. Do NOT operate a floor machine with an abrasive pad on unwaxed or unfinished floor.

2.0 LEAD. This narrative addresses the inspection, findings, conclusions, and data accumulated by Code 468, NPWC Pensacola during lead-based-paint and soil surveys of subject buildings and grounds.

2.1 All LBP inspections were performed by EPA trained and certified inspectors.

2.2 Scope of Work

LBP Survey consisted of the following:

Step 1 - Preliminary walkthrough and thorough inspection of all accessible interior and exterior areas of selected representative building components for the purpose of locating and documenting surfaces coated with suspected LBP.

Step 2 - Development and implementation of a testing protocol for all suspect LBPs.

Step 3 - Performance of quality-assured XRF testing of all accessible and suspect surface

coatings that are located both on interior and exterior areas of subject buildings.

Step 4 - Preparation and submission of this report which includes:

- a. Tables of all tested homogeneous surfaces coated with suspected LBP;
- b. Hazard/Materials assessment;
- c. Conclusions and recommendations; and
- d. Results of field tests.

2.3 INSPECTION AND TESTING METHODS

2.31 Inspection

The Lead-Based Paint (LBP) inspection process consists of a complete visual inspection of both interior and exterior accessible building surfaces for the presence of paints suspected of containing lead. Based on on-site observations, representative building components surfaced with homogeneous suspect paint were selected for X-Ray Fluorescence (XRF) testing.

2.32 Testing Equipment

Inspections to determine the presence of lead in paint were accomplished by using a MAP Spectrum Analyzer (XRF) manufactured by Scitec Corporation. Calibration checks using ANSI standard (paint films and painted wood block with known lead quantities) were taken at regular intervals for Quality Assurance. The MAP XRF Spectrum Analyzer operational specifications are listed in Appendix B.

2.4 SUMMARY OF FINDINGS

As a result of this inspection, the following building components found interior or exterior to building 4 were identified to be surfaced with paint that contains lead in excess of the standards set by the Lead-Based Paint Poison Prevention Act, Section 302, and Department of Housing and Urban Development (HUD) Guidelines for Hazard Identification and Abatement in Public and Indian Housing revised September 1990 and May 1991.

Building 4

Exterior:	1. FAIR CONDITION, WHITE, WOOD, DOOR JAMB	1.4 mg/cm ²
Interior:	2. FAIR CONDITION, WHITE, METAL, COLUMN	10.3 mg/cm ² (TEST)



2.5 CONCLUSIONS AND RECOMMENDATIONS

As a result of the inspections for LBP in building 4, code 468, Public Works Center, NAS Pensacola provides the following conclusions and recommendations.

1. Lead-based paint was found to be present as a result of this inspection in building 4 as listed in section 2.4. All data collected with assay numbers, locations, paint conditions, substrates, components, and associated results (where conclusive) are listed in APPENDIX C (XRF Data Sheets).
2. Sample values greater than 1.6 mg/cm² on a screen setting (1.3 mg/cm² on test setting) were considered positive for containing lead. Values less than or equal to 1.6 mg/cm² on a screen setting (1.3 mg/cm² on a test setting) were considered inconclusive due to the operating parameters of the MAP Spectrum Analyzer (refer to operating specifications in APPENDIX B). Paint chip sampling and lab analyses is recommended for those assays found to be inconclusive.
3. Lead-based-paint abatement strategies (paint removal, or LBP painted component removal) should be scheduled when building undergoes renovation or demolition.
4. Those building components containing LBP assessed as in good condition may be managed in-place (encapsulation or enclosure). Removal is recommended if LBP components are disturbed during renovations or demolition.

3.0 LEAD IN SOIL. This narrative addresses the sampling, findings, conclusions, and lab analysis performed by Code 468, NPWC Pensacola pertaining to soil sampling to determine level (if any) of lead contamination. This effort focused on soil around foundations of subject buildings and associated grounds.

3.1 All soil sampling was performed by EPA trained and certified LBP inspectors.

3.2 Federal standards have not been set for lead in soil. Although a standard soil lead action level does not exist, most authorities agree that residential soil lead levels should not exceed 500 parts per million (ppm).



SAMPLE #/ LOCATION	PERCENT SOIL EXPOSED	RESULTS OF ANALYSES (PPM)
BUILDING 4		
SEE HAWK MISSILE SITE MISCELLANEOUS	-	-

* FOR LAB ANALYSES OF SOIL SAMPLES SEE APPENDIX D



APPENDIX A
LAB ANALYSES OF ASBESTOS
SAMPLES

Where?



APPENDIX B

OPERATIONAL SPECIFICATIONS



MAP XRF SPECTRUM ANALYZER OPERATIONAL SPECIFICATIONS

1. Reads from 0.0 to 200.0 mg/square centimeter in increments of 0.1 mg/square centimeter. Inconclusive ranges are:
 - +/- 0.6 for screen (15+ seconds sample time)
 - +/- 0.3 for test (60+ seconds sample time)
 - +/- 0.15 for confirmation (240+ seconds sample time)
2. The software analyzes the complete signal spectrum to determine substrate correction factor.
3. Operating temperature: 20 degrees F to 100 degrees F
4. Radioactive Source: 40 millicuries Cobalt -57 isotope
5. Weight: console (9 lb) scanner (3.5 lb)



APPENDIX C
XRF DATA SHEETS

BUILDING 4

XRF DATA SHEET

DATE:03/23/95

Assay #	Substrate	Paint Condition	Location	Wall Number	Component	Color	Type	K-Shell mg/cm ²
8	WOOD	FAIR	KITCHEN	2	DOOR JAMB	WHITE	TEST	1.4
10	METAL	FAIR	EXTERIOR	1	COLUMN	WHITE	SCREEN	10.3



APPENDIX D
LAB ANALYSES OF SOIL
SAMPLES



**LEAD AND ASBESTOS SURVEY
OF
BUILDING 5**

**INSPECTION PERFORMED BY
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA**

MAY 22, 1995

1.0 ASBESTOS. This narrative addresses the inspection, findings, conclusions, and lab analyses performed by Code 468, NPWC Pensacola pertaining to suspect asbestos-containing-material (ACM) in subject buildings.

1.1 All asbestos inspection and sampling was performed by EPA trained and certified asbestos inspectors.

1.2 This table contains a listing of all Asbestos-Containing-Material (ACM) and those materials that were assumed to contain asbestos in the subject building. Material may be assumed positive for asbestos when that material has previously tested positive for the presence of asbestos or the material is inaccessible by typical sampling techniques.

HOMOGENEOUS AREA/MATERIAL	LOCATION	APPROX. QUANTITY	CONDITION FRIABILITY CONTACT
BUILDING 5			
NO ACM DETECTED	-	-	-

* FOR LAB ANALYSES OF ASBESTOS SAMPLES SEE APPENDIX A

SEE PRINTS FOR ACM HOMOGENEOUS AREA LOCATIONS.

1.3 DEFINITIONS.

1.3.1 Asbestos Containing Materials (ACM)

Surfacing Materials - ACM sprayed or troweled on surfaces (walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.

Thermal System Insulation - Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold water systems and heating, ventilation, and air conditioning (HVAC) systems. This includes pipe lagging, pipe wrap, block, batt, and blanket insulation; cement, "muds"; and a variety of other products such as gaskets and ropes.

Miscellaneous Materials - Other, largely nonfriable products and materials such as floor tile, roofing felt, concrete pipe, outdoor siding, and fabrics.

Why any of these pages?



1.3.2 Friable Materials - Material that, when dry, may be crumbled, crushed, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.3 Non-friable Materials - Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.4 Assessment Criteria

1.3.4.1 Surfacing Materials

Poor Condition (Significantly damaged) - ACM with one or more of the following characteristics: The surface crumbling or blistering over at least one tenth of the area if the damage is evenly distributed, or at least one quarter if the damage is localized; large areas of material hanging from the surface, delaminated, or showing adhesive failure; at least one tenth of the surface water stained or heavily gouged, marred or abraded or one quarter if the damage is localized; large accumulation of powder, dust, or debris on surfaces beneath the ceiling or wall.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: up to one tenth of the surface (if the damage is evenly distributed) or up to one quarter of the surface (if the damage is localized) is blistered, crumbling, water stained, or gouged marred or abraded; some accumulation of powder, dust or debris on surfaces beneath the ceiling or wall.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.4.2 Thermal System Insulation

Poor Condition (Significantly Damaged) - ACM with one or more of the following characteristics: mostly missing jackets; water damaged, crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers if the damage is evenly distributed, or at least one quarter if the damage is localized; powder, dust and debris on surfaces beneath pipes, boilers, tanks, etc.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: a few water stains or sections of missing jackets; crushed insulation or water stains, gouges, punctures, or mars on up to one tenth of the insulation if the damage is evenly distributed, or up to one quarter if the damage is localized; some accumulation of powder, dust, debris on surfaces beneath pipes, boilers, tanks, etc.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.5 Homogeneous Area - An application of ACM which is uniform in color and texture and

appears identical in every respect.

1.3.6 Potential for Contact with the Material

High - Service workers work in the vicinity of the material more than once a week, or the material is in a public area and accessible to building occupants.

Moderate - Service workers work in the vicinity of the material once per month to once per week or the material is in a room or office and accessible to the occupants.

Low - Service workers work in the vicinity of the material less than once per month or the material is visible but not within reach of building occupants.

1.4 Asbestos Containing Material (ACM) Management - The purpose of this survey is to identify Asbestos Containing Materials. It is not to be construed as an Asbestos Management Plan (AMP); however, the following recommendations should be observed when working around ACM to minimize potential health hazards:

1.4.1 Training - Provide two hour asbestos awareness training for custodial and maintenance staff. This training should also be provided on a voluntary basis for any other staff and for building occupants.

1.4.2 Minor Release Episode - A minor release is defined as less than 3 square feet/linear feet of ACM becoming dislodged or falling. Minor release control can be performed by the Facility Coordinator or building maintenance personnel upon having completed 15 hours (two hours "Asbestos Awareness" training and an additional training). If this option is not exercised, the response shall be to restrict the area, restrict air movement in the area, and contact key asbestos abatement personnel. The following actions shall be used;

Restrict entry into the area by persons other than those necessary to perform the maintenance project.

Post signs necessary to prevent entry by unauthorized persons.

Inhibit the spread of any released fibers by thoroughly saturating the debris with wet methods.

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or

impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

(1) The area has been visually inspected and found fiber free , and aggressive sampling performed.

(2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.3 Major Release Episode - A major release is defined as any falling or dislodging of friable ACM, greater than 3 square feet/linear feet. Only key asbestos abatement personnel may perform abatement. The following actions shall be taken immediately:

Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

Post signs necessary to prevent entry by unauthorized persons.

Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

Use work practices or other controls to inhibit the spread of any released fibers;
wet-methods- thoroughly saturate the debris
protective clothing
HEPA-vacuums
mini-enclosures
glove bags

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet



methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

(1) The area has been visually inspected and found fiber free , and aggressive sampling performed.

(2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.4 Maintenance Work (Operating and Controls for Maintaining Asbestos Floor Tile) The EPA recommends that building owners and custodial/maintenance staff consider the following basic guidelines when stripping wax or finish coat from asbestos-containing floor tile:

1. Avoid stripping floors. Stripping floors should be done as infrequently as possible - perhaps once or twice a year or less depending on circumstances. The frequency should be carefully considered as floor maintenance schedules or contracts are written or renewed.
2. Properly train staff. Custodial or maintenance staff who strip floors should be trained to operate properly and safely the machines, pads, and floor care chemicals used at the facility.
3. Follow appropriate work practices. Custodial or maintenance staff who strip floors should follow appropriate work practices, such as those recommended here, under informed supervision. Directions from floor tile and floor wax product manufacturers on proper maintenance procedures should be consulted.
4. Strip floors while wet. The floor should be kept adequately wet during the stripping operation. Do NOT perform dry stripping. Prior to machine operation, an emulsion of chemical stripper in water is commonly applied to the floor with a mop to soften the wax



or finish coat. After the stripping and before application of the new wax, the floor should be thoroughly cleaned, while wet.

5. Run machine at slow speed. If the machine used to remove wax or finish coat has variable speeds, it should be run at slow speed (about 175-190 rpm) during stripping operation.

6. Select the least abrasive pad possible. EPA recommends the machine be equipped with the least abrasive pad possible to strip wax or finish coat from the asbestos-containing floors.

7. Do not overstrip floors. Stop stripping when the old surface coat is removed. Overstripping can damage the floor and may cause the release of asbestos fibers. Do NOT operate a floor machine with an abrasive pad on unwaxed or unfinished floor.

2.0 LEAD. This narrative addresses the inspection, findings, conclusions, and data accumulated by Code 468, NPWC Pensacola during lead-based-paint and soil surveys of subject buildings and grounds.

2.1 All LBP inspections were performed by EPA trained and certified inspectors.

2.2 Scope of Work

LBP Survey consisted of the following:

Step 1 - Preliminary walkthrough and thorough inspection of all accessible interior and exterior areas of selected representative building components for the purpose of locating and documenting surfaces coated with suspected LBP.

Step 2 - Development and implementation of a testing protocol for all suspect LBPs.

Step 3 - Performance of quality-assured XRF testing of all accessible and suspect surface coatings that are located both on interior and exterior areas of subject buildings.

Step 4 - Preparation and submission of this report which includes:

- a. Tables of all tested homogeneous surfaces coated with suspected LBP;
- b. Hazard/Materials assessment;
- c. Conclusions and recommendations; and
- d. Results of field tests.

2.3 INSPECTION AND TESTING METHODS

2.31 Inspection

The Lead-Based Paint (LBP) inspection process consists of a complete visual inspection of both interior and exterior accessible building surfaces for the presence of paints suspected of containing lead. Based on on-site observations, representative building components surfaced with homogeneous suspect paint were selected for X-Ray Fluorescence (XRF) testing.

2.32 Testing Equipment

Inspections to determine the presence of lead in paint were accomplished by using a MAP Spectrum Analyzer (XRF) manufactured by Scitec Corporation. Calibration checks using ANSI standard (paint films and painted wood block with known lead quantities) were taken at regular intervals for Quality Assurance. The MAP XRF Spectrum Analyzer operational specifications are listed in Appendix B.

2.4 SUMMARY OF FINDINGS

As a result of this inspection, the following building components found interior or exterior to building 5 were identified to be surfaced with paint that contains lead in excess of the standards set by the Lead-Based Paint Poison Prevention Act, Section 302, and Department of Housing and Urban Development (HUD) Guidelines for Hazard Identification and Abatement in Public and Indian Housing revised September 1990 and May 1991.

Building 5

Exterior: NONE

Interior: NONE

2.5 CONCLUSIONS AND RECOMMENDATIONS

As a result of the inspections for LBP in building 5, code 468, Public Works Center, NAS Pensacola provides the following conclusions and recommendations.

1. No Lead-based paint was found to be present as a result of this inspection in building 5 as listed in section 2.4. All data collected with assay numbers, locations, paint conditions, substrates, components, and associated results (where conclusive) are listed in APPENDIX C (XRF Data Sheets).
2. Sample values greater than 1.6 mg/cm^2 on a screen setting (1.3 mg/cm^2 on test setting)

were considered positive for containing lead. Values less than or equal to 1.6 mg/cm² on a screen setting (1.3 mg/cm² on a test setting) were considered inconclusive due to the operating parameters of the MAP Spectrum Analyzer (refer to operating specifications in APPENDIX B). Paint chip sampling and lab analyses is recommended for those assays found to be inconclusive.

3. Lead-based-paint abatement strategies (paint removal, or LBP painted component removal) should be scheduled when building undergoes renovation or demolition.
4. Those building components containing LBP assessed as in good condition may be managed in-place (encapsulation or enclosure). Removal is recommended if LBP components are disturbed during renovations or demolition.

3.0 LEAD IN SOIL. This narrative addresses the sampling, findings, conclusions, and lab analysis performed by Code 468, NPWC Pensacola pertaining to soil sampling to determine level (if any) of lead contamination. This effort focused on soil around foundations of subject buildings and associated grounds.

3.1 All soil sampling was performed by EPA trained and certified LBP inspectors.

3.2 Federal standards have not been set for lead in soil. Although a standard soil lead action level does not exist, most authorities agree that residential soil lead levels should not exceed 500 parts per million (ppm).

SAMPLE #/ LOCATION	PERCENT SOIL EXPOSED	RESULTS OF ANALYSES (PPM)
BUILDING 5		
SEE HAWK MISSILE SITE MISCELLANEOUS	-	-

* FOR LAB ANALYSES OF SOIL SAMPLES SEE APPENDIX D



**APPENDIX A
LAB ANALYSES OF ASBESTOS
SAMPLES**



APPENDIX B OPERATIONAL SPECIFICATIONS



MAP XRF SPECTRUM ANALYZER OPERATIONAL SPECIFICATIONS

1. Reads from 0.0 to 200.0 mg/square centimeter in increments of 0.1 mg/square centimeter. Inconclusive ranges are:

+/- 0.6 for screen (15+ seconds sample time)

+/- 0.3 for test (60+ seconds sample time)

+/- 0.15 for confirmation (240+ seconds sample time)

2. The software analyzes the complete signal spectrum to determine substrate correction factor.

3. Operating temperature: 20 degrees F to 100 degrees F

4. Radioactive Source: 40 millicuries Cobalt -57 isotope

5. Weight: console (9 lb) scanner (3.5 lb)



APPENDIX C
XRF DATA SHEETS



**APPENDIX D
LAB ANALYSES OF SOIL
SAMPLES**

LEAD AND ASBESTOS SURVEY
OF
HAWK MISSILE SITE
(MISCELLANEOUS)

INSPECTION PERFORMED BY
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

MAY 22, 1995

1.0 ASBESTOS. This narrative addresses the inspection, findings, conclusions, and lab analyses performed by Code 468, NPWC Pensacola pertaining to suspect asbestos-containing-material (ACM) in subject buildings.

1.1 All asbestos inspection and sampling was performed by EPA trained and certified asbestos inspectors.

1.2 This table contains a listing of all Asbestos-Containing-Material (ACM) and those materials that were assumed to contain asbestos in the subject building. Material may be assumed positive for asbestos when that material has previously tested positive for the presence of asbestos or the material is inaccessible by typical sampling techniques.

HOMOGENEOUS AREA/MATERIAL	LOCATION	APPROX. QUANTITY	CONDITION FRIABILITY CONTACT
HAWK MISSILE SITE MISCELLANEOUS			
HOMO J/ 9"X9" BLACK FLOOR TILE ASSUMED	GUARD SHACK #1	30 ft ²	FAIR NON LOW
HOMO K/ 9"X9"GREEN FLOOR TILE ASSUMED	GUARD SHACK #3	30 ft ²	FAIR NON LOW

* FOR LAB ANALYSES OF ASBESTOS SAMPLES SEE APPENDIX A

SEE PRINTS FOR ACM HOMOGENEOUS AREA LOCATIONS.

1.3 DEFINITIONS.

1.3.1 Asbestos Containing Materials (ACM)

Surfacing Materials - ACM sprayed or troweled on surfaces (walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This includes plaster and fireproofing insulation.

Thermal System Insulation - Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold water systems and heating, ventilation, and air conditioning (HVAC) systems. This includes pipe



lagging, pipe wrap, block, batt, and blanket insulation; cement, "muds"; and a variety of other products such as gaskets and ropes.

Miscellaneous Materials - Other, largely nonfriable products and materials such as floor tile, roofing felt, concrete pipe, outdoor siding, and fabrics.

1.3.2 Friable Materials - Material that, when dry, may be crumbled, crushed, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.3 Non-friable Materials - Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

1.3.4 Assessment Criteria

1.3.4.1 Surfacing Materials

Poor Condition (Significantly damaged) - ACM with one or more of the following characteristics: The surface crumbling or blistering over at least one tenth of the area if the damage is evenly distributed, or at least one quarter if the damage is localized; large areas of material hanging from the surface, delaminated, or showing adhesive failure; at least one tenth of the surface water stained or heavily gouged, marred or abraded or one quarter if the damage is localized; large accumulation of powder, dust, or debris on surfaces beneath the ceiling or wall.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: up to one tenth of the surface (if the damage is evenly distributed) or up to one quarter of the surface (if the damage is localized) is blistered, crumbling, water stained, or gouged marred or abraded; some accumulation of powder, dust or debris on surfaces beneath the ceiling or wall.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.4.2 Thermal System Insulation

Poor Condition (Significantly Damaged) - ACM with one or more of the following characteristics: mostly missing jackets; water damaged, crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers if the damage is evenly distributed, or at least one quarter if the damage is localized; powder, dust and debris on surfaces beneath pipes, boilers, tanks, etc.

Fair Condition (Damaged) - ACM with one or more of the following characteristics: a few water stains or sections of missing jackets; crushed insulation or water stains, gouges, punctures, or mars on up to one tenth of the insulation if the damage is evenly distributed, or up to one quarter if the damage is localized; some accumulation of powder, dust, debris on surfaces

beneath pipes, boilers, tanks, etc.

Good Condition - ACM with no visible damage or deterioration, or showing only very limited damage or deterioration.

1.3.5 Homogeneous Area - An application of ACM which is uniform in color and texture and appears identical in every respect.

1.3.6 Potential for Contact with the Material

High - Service workers work in the vicinity of the material more than once a week, or the material is in a public area and accessible to building occupants.

Moderate - Service workers work in the vicinity of the material once per month to once per week or the material is in a room or office and accessible to the occupants.

Low - Service workers work in the vicinity of the material less than once per month or the material is visible but not within reach of building occupants.

1.4 Asbestos Containing Material (ACM) Management - The purpose of this survey is to identify Asbestos Containing Materials. It is not to be construed as an Asbestos Management Plan (AMP); however, the following recommendations should be observed when working around ACM to minimize potential health hazards:

1.4.1 Training - Provide two hour asbestos awareness training for custodial and maintenance staff. This training should also be provided on a voluntary basis for any other staff and for building occupants.

1.4.2 Minor Release Episode - A minor release is defined as less than 3 square feet/linear feet of ACM becoming dislodged or falling. Minor release control can be performed by the Facility Coordinator or building maintenance personnel upon having completed 15 hours (two hours "Asbestos Awareness" training and an additional training). If this option is not exercised, the response shall be to restrict the area, restrict air movement in the area, and contact key asbestos abatement personnel. The following actions shall be used;

Restrict entry into the area by persons other than those necessary to perform the maintenance project.

Post signs necessary to prevent entry by unauthorized persons.

Inhibit the spread of any released fibers by thoroughly saturating the debris with wet methods.

Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately



have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

(1) The area has been visually inspected and found fiber free , and aggressive sampling performed.

(2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.3 Major Release Episode - A major release is defined as any falling or dislodging of friable ACM, greater than 3 square feet/linear feet. Only key asbestos abatement personnel may perform abatement. The following actions shall be taken immediately:

Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

Post signs necessary to prevent entry by unauthorized persons.

Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

Use work practices or other controls to inhibit the spread of any released fibers;

- wet-methods- thoroughly saturate the debris
- protective clothing
- HEPA-vacuums
- mini-enclosures
- glove bags

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★
OCT 2008
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Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster caulking, cement, or insulation or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented.

Clean all fixtures or other components in the immediate work area using either wet methods or HEPA-vacuum.

Place the asbestos debris and other cleaning material in labeled, double sealed bags or impermeable, leak tight containers.

No "Regulated Area" shall be released for uncontrolled access until the following has been demonstrated

- (1) The area has been visually inspected and found fiber free , and aggressive sampling performed.
- (2) Area monitoring for asbestos fibers performed demonstrating a clearance of less than 0.01f/cc.

ASBESTOS ENCLOSURE OPERATIONS: The enclosure should not be dismantled unless the final samples show asbestos concentrations of less than the final standard's action level (29 CFR 1910.58 action level is currently 0.01f/cc). EPA recommends 0.01f/cc be achieved before cleanup is considered complete and the enclosure can be dismantled.

ASBESTOS NON-ENCLOSURE OPERATIONS: Monitoring of asbestos "regulated area" shall be the Management Planner's and Industrial Hygienist's decision based upon physical evaluation of the area.

1.4.4 Maintenance Work (Operating and Controls for Maintaining Asbestos Floor Tile) The EPA recommends that building owners and custodial/maintenance staff consider the following basic guidelines when stripping wax or finish coat from asbestos-containing floor tile:

1. Avoid stripping floors. Stripping floors should be done as infrequently as possible - perhaps once or twice a year or less depending on circumstances. The frequency should be carefully considered as floor maintenance schedules or contracts are written or renewed.
2. Properly train staff. Custodial or maintenance staff who strip floors should be trained to operate properly and safely the machines, pads, and floor care chemicals used at the facility.
3. Follow appropriate work practices. Custodial or maintenance staff who strip floors should follow appropriate work practices, such as those recommended here, under informed supervision. Directions from floor tile and floor wax product manufacturers on



proper maintenance procedures should be consulted.

4. Strip floors while wet. The floor should be kept adequately wet during the stripping operation. Do NOT perform dry stripping. Prior to machine operation, an emulsion of chemical stripper in water is commonly applied to the floor with a mop to soften the wax or finish coat. After the stripping and before application of the new wax, the floor should be thoroughly cleaned, while wet.

5. Run machine at slow speed. If the machine used to remove wax or finish coat has variable speeds, it should be run at slow speed (about 175-190 rpm) during stripping operation.

6. Select the least abrasive pad possible. EPA recommends the machine be equipped with the least abrasive pad possible to strip wax or finish coat from the asbestos-containing floors.

7. Do not overstrip floors. Stop stripping when the old surface coat is removed. Overstripping can damage the floor and may cause the release of asbestos fibers. Do NOT operate a floor machine with an abrasive pad on unwaxed or unfinished floor.

2.0 LEAD. This narrative addresses the inspection, findings, conclusions, and data accumulated by Code 468, NPWC Pensacola during lead-based-paint and soil surveys of subject buildings and grounds.

2.1 All LBP inspections were performed by EPA trained and certified inspectors.

2.2 Scope of Work

LBP Survey consisted of the following:

Step 1 - Preliminary walkthrough and thorough inspection of all accessible interior and exterior areas of selected representative building components for the purpose of locating and documenting surfaces coated with suspected LBP.

Step 2 - Development and implementation of a testing protocol for all suspect LBPs.

Step 3 - Performance of quality-assured XRF testing of all accessible and suspect surface coatings that are located both on interior and exterior areas of subject buildings.

Step 4 - Preparation and submission of this report which includes:

- a. Tables of all tested homogeneous surfaces coated with suspected LBP;
- b. Hazard/Materials assessment;
- c. Conclusions and recommendations; and

d. Results of field tests.

2.3 INSPECTION AND TESTING METHODS

2.31 Inspection

The Lead-Based Paint (LBP) inspection process consists of a complete visual inspection of both interior and exterior accessible building surfaces for the presence of paints suspected of containing lead. Based on on-site observations, representative building components surfaced with homogeneous suspect paint were selected for X-Ray Fluorescence (XRF) testing.

2.32 Testing Equipment

Inspections to determine the presence of lead in paint were accomplished by using a MAP Spectrum Analyzer (XRF) manufactured by Scitec Corporation. Calibration checks using ANSI standard (paint films and painted wood block with known lead quantities) were taken at regular intervals for Quality Assurance. The MAP XRF Spectrum Analyzer operational specifications are listed in Appendix B.

2.4 SUMMARY OF FINDINGS

As a result of this inspection, the following building components found interior or exterior to the Hawk Missile Site (Miscellaneous) were identified to be surfaced with paint that contains lead in excess of the standards set by the Lead-Based Paint Poison Prevention Act, Section 302, and Department of Housing and Urban Development (HUD) Guidelines for Hazard Identification and Abatement in Public and Indian Housing revised September 1990 and May 1991.

HAWK MISSILE SITE (MISCELLANEOUS)

Exterior:	1. POOR CONDITION, YELLOW, CONCRETE, MANHOLE	2.0 mg/cm ²
	2. POOR CONDITION, YELLOW, ASPHALT, STRIPING	9.0 mg/cm ²
	3. POOR CONDITION, BLACK, CONCRETE, STRIPING	6.7 mg/cm ²
	4. POOR CONDITION, SILVER, METAL, COLUMN	1.5 mg/cm ²
	5. POOR CONDITION, YELLOW, METAL, CABLE TRAY	9.0 mg/cm ²
		(TEST)
Guard Shack #1:	6. POOR CONDITION, BLUE, WOOD, DOOR JAMB	6.0 mg/cm ²
	7. POOR CONDITION, WHITE, WOOD, SOFFIT	3.2 mg/cm ²

Guard Shack #2:

8. POOR CONDITION, PEACH, CONCRETE, WALL 7.8 mg/cm²

Interior: NONE

2.5 CONCLUSIONS AND RECOMMENDATIONS

As a result of the inspections for LBP on the Hawk Missile Site (Miscellaneous), code 468, Public Works Center, NAS Pensacola provides the following conclusions and recommendations.

1. Lead-based paint was found to be present as a result of this inspection on the Hawk Missile Site (Miscellaneous) as listed in section 2.4. All data collected with assay numbers, locations, paint conditions, substrates, components, and associated results (where conclusive) are listed in APPENDIX C (XRF Data Sheets).
2. Sample values greater than 1.6 mg/cm² on a screen setting (1.3 mg/cm² on test setting) were considered positive for containing lead. Values less than or equal to 1.6 mg/cm² on a screen setting (1.3 mg/cm² on a test setting) were considered inconclusive due to the operating parameters of the MAP Spectrum Analyzer (refer to operating specifications in APPENDIX B). Paint chip sampling and lab analyses is recommended for those assays found to be inconclusive.
3. Lead-based-paint abatement strategies (paint removal, or LBP painted component removal) should be scheduled when building undergoes renovation or demolition.
4. Those building components containing LBP assessed as in good condition may be managed in-place (encapsulation or enclosure). Removal is recommended if LBP components are disturbed during renovations or demolition.

Poor condition?

3.0 LEAD IN SOIL. This narrative addresses the sampling, findings, conclusions, and lab analysis performed by Code 468, NPWC Pensacola pertaining to soil sampling to determine level (if any) of lead contamination. This effort focused on soil around foundations of subject buildings and associated grounds.

3.1 All soil sampling was performed by EPA trained and certified LBP inspectors.

3.2 Federal standards have not been set for lead in soil. Although a standard soil lead action level does not exist, most authorities agree that residential soil lead levels should not exceed 500 parts per million (ppm).



SAMPLE #/ LOCATION	PERCENT SOIL EXPOSED	RESULTS OF ANALYSES (PPM)
HAWK MISSILE SITE (MISCELLANEOUS)		
KW003/BACKGROUND	60%	200 mg/kg (ppm)
KW004	40%	110 mg/kg (ppm)
KW005	80%	130 mg/kg (ppm)
KW006	50%	420 mg/kg (ppm)
KW007	90%	60 mg/kg (ppm)
KW008	50%	100 mg/kg (ppm)
KW009	80%	620 mg/kg (ppm)

* FOR LAB ANALYSES OF SOIL SAMPLES SEE APPENDIX D

*> 500 ppm
noel what?*



**APPENDIX A
LAB ANALYSES OF ASBESTOS
SAMPLES**



APPENDIX B
OPERATIONAL SPECIFICATIONS



MAP XRF SPECTRUM ANALYZER OPERATIONAL SPECIFICATIONS

1. Reads from 0.0 to 200.0 mg/square centimeter in increments of 0.1 mg/square centimeter. Inconclusive ranges are:

+/- 0.6 for screen (15+ seconds sample time)

+/- 0.3 for test (60+ seconds sample time)

+/- 0.15 for confirmation (240+ seconds sample time)

2. The software analyzes the complete signal spectrum to determine substrate correction factor.

3. Operating temperature: 20 degrees F to 100 degrees F

4. Radioactive Source: 40 millicuries Cobalt -57 isotope

5. Weight: console (9 lb) scanner (3.5 lb)



APPENDIX C
XRF DATA SHEETS



HAWK MISSILE SITE MISCELLANEOUS

XRF DATA SHEET

DATE:03/23/95

Assay #	Substrate	Paint Condition	Location	Wall Number	Component	Color	Type	K-Shell mg/cm ²
=====	=====	=====	=====	=====	=====	=====	=====	=====
2	CONCRETE	POOR	MESS HALL		1 MAN-HOLE	YELLOW	SCREEN	2.0
3	ASPHALT	POOR	MESS HALL		1 STRIPING	YELLOW	SCREEN	9.0
4	CONCRETE	POOR	MESS HALL		1 STRIPING	BLACK	SCREEN	6.7
8	METAL	POOR	MESS HALL		2 COLUMN	SILVER	TEST	1.5
9	METAL	POOR	MESS HALL		3 CABLE TRAY	YELLOW	SCREEN	9.0
12	WOOD	POOR	GUARD SHACK #1		1 DOOR JAMB	BLUE	SCREEN	6.0
13	WOOD	POOR	GUARD SHACK #1		1 SOFFIT	WHITE	SCREEN	3.2
14	CONCRETE	GOOD	GUARD SHACK #2		1 WALL	PEACH	SCREEN	7.8



**APPENDIX D
LAB ANALYSES OF SOIL
SAMPLES**

Navy Public Works Center Environmental Laboratory

Bldg 3691, Code 920
 NAS Pensacola, Fl. 32508
 Phone (904) 452-4728/3642
 Autovon 922-4728/3642

Requester: WWHP/NPWC Inspections
Address: Bldg 1659, code 468
 NAS Pensacola, Fl 32508
Phone #: 452-4760
Contact: M. Ladner

Laboratory Report

Lead (Pb) in Soil

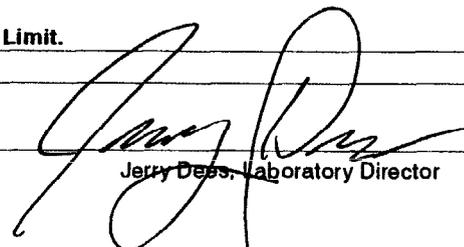
Lab ID Number: 9505020 A
Sample Date: 12 Apr 95
Received Date: 28 Apr 95
Sample Site: NAS Key West
Job Order #: 160 4002

Sample ID#	Lab	1- 52438	2- 52439	3- 52440	4- 52441	Analyst(s):							
Sample Name	Requester	KW 001 Background	KW 002 East Martello Batt.	KW 003 Hawk Background	KW 004 Hawk Site 1	Brian Nelson							
Collector Name		DJ/LG	DJ/LG	DJ/LG	DJ/LG								
Date/Time Collected (Military)	Comp start					Date(s) of analysis: 5 May 95							
	Comp stop												
	Grab	12 Apr 95 @	12 Apr 95 @	12 Apr 95 @	12 Apr 95 @								
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab								
Sample Matrix		Soil	Soil	Soil	Soil								
PARAMETER		ID#	Det.	ID#	Det.	ID#	Det.	ID#	Det.	Preservative(s)			
Metals:	METHOD #	1- 52438	units	Limit	2- 52439	units	Limit	3- 52440	units	Limit	4- 52441	units	Limit
Lead(Pb)	EPA 6010A	X	260 mg/kg	10 X	420 mg/kg	10 X	200 mg/kg	10 X	110 mg/kg	10	None		

Sample ID#	Lab	5- 52442	6- 52443	7- 52444	8- 52445	Analyst(s):							
Sample Name	Requester	KW 005 Hawk Site 2	KW 006 Hawk Site 3	KW 007 Hawk Site 4	KW 008 Hawk Site 5	Brian Nelson							
Collector Name		DJ/LG	DJ/LG	DJ/LG	DJ/LG								
Date/Time Collected (Military)	Comp start					Date(s) of analysis: 5 May 95							
	Comp stop												
	Grab	12 Apr 95 @											
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab								
Sample Matrix		Soil	Soil	Soil	Soil								
PARAMETER		ID#	Det.	ID#	Det.	ID#	Det.	ID#	Det.	Preservative(s)			
Metals:	METHOD #	5- 52442	units	Limit	6- 52443	units	Limit	7- 52444	units	Limit	8- 52445	units	Limit
Lead(Pb)	EPA 6010A	X	130 mg/kg	10 X	420 mg/kg	10 X	60 mg/kg	10 X	100 mg/kg	10	None		

Comments: mg/kg=milligrams per kilogram(ppm). BDL=Below Detection Limit.

Approved by:



Jerry Deas, Laboratory Director

Date/Time: 08-May-95 13:20

Navy Public Works Center Environmental Laboratory

Bldg 3691, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4728/3642
Autovon 922-4728/3642

Requester: WWHP/NPWC Inspections
Address: Bldg 1659, code 468
NAS Pensacola, Fl 32508
Phone #: 452-4760
Contact: M. Ladner

Laboratory Report

Lead (Pb) in Soil

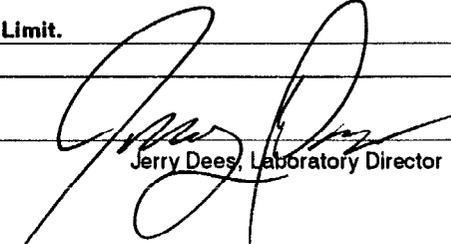
Lab ID Number: 9505020 B
Sample Date: 12 & 19 Apr 95
Received Date: 28 Apr 95
Sample Site: NAS Key West
Job Order #: 160 4002

Sample ID#	Lab	1- 52446	2- 52447	3- 52448	4- 52449	Analyst(s):				
Sample Name	Requester	KW009 Hawk Site 6		KW 010 Fuel Farm BG		Brian Nelson				
Collector Name		DJ/LG		DJ/LG						
Date/Time Collected (Military)	Comp start					Date(s) of analysis: 5 May 95				
	Comp stop									
	Grab	12 Apr 95 @	12 Apr 95 @	12 Apr 95 @	12 Apr 95 @					
Sample Type	Comp/Grab	Grab		Grab						
Sample Matrix		Soil		Soil						
PARAMETER		ID#	Det.	ID#	Det.	ID#	Det.	ID#	Det.	Preservative(s)
Metals:	METHOD #	1- 52446	units Limit	2- 52447	units Limit	3- 52448	units Limit	4- 52449	units Limit	
Lead(Pb)	EPA 6010A	X	620 mg/kg 10 X	140 mg/kg 10 X	50 mg/kg 10 X	50 mg/kg 10 X	None			

Sample ID#	Lab	5- 52450	6- 52451	7- 52452	8- 52453	Analyst(s):				
Sample Name	Requester	KW 013 Fuel Farm 3		KW 014 Fuel Farm 4		Brian Nelson				
Collector Name		DJ/LG		DJ/LG						
Date/Time Collected (Military)	Comp start					Date(s) of analysis: 5 May 95				
	Comp stop									
	Grab	19 Apr 95 @	19 Apr 95 @	19 Apr 95 @	19 Apr 95 @					
Sample Type	Comp/Grab	Grab		Grab						
Sample Matrix		Soil		Soil						
PARAMETER		ID#	Det.	ID#	Det.	ID#	Det.	ID#	Det.	Preservative(s)
Metals:	METHOD #	5- 52450	units Limit	6- 52451	units Limit	7- 52452	units Limit	8- 52453	units Limit	
Lead(Pb)	EPA 6010A	X	60 mg/kg 10 X	40 mg/kg 10 X	730 mg/kg 10 X	450 mg/kg 10 X	None			

Comments: mg/kg = milligrams per kilogram(ppm). BDL=Below Detection Limit.

Approved by:



Jerry Dees, Laboratory Director

Date/Time: 08-May-95 14:12