

Best Available Copy

ASBESTOS CHARACTERIZATION REPORT

**BUILDINGS 776 & 777
SECONDARY BUILDINGS**

**ROCKY FLATS ENVIRONMENTAL
TECHNOLOGY SITE**

GOLDEN, COLORADO

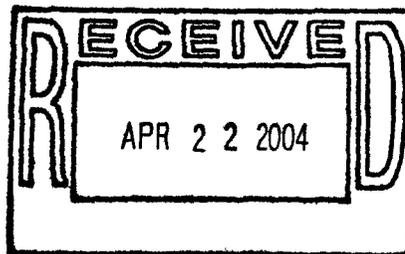
Best Available Copy

Prepared By:

**Foothills Environmental, Inc.
2801 Youngfield St., Ste. 300
Golden, CO 80401**

REVIEWED FOR CLASSIFICATION UCH

By [Signature]
Date 1/05/01



ADMIN RECORD

B776-8-0000

1/65

Table of Contents

TEXT

2

BUILDING 701

3

BUILDING 702

4

BUILDING 703

5

BUILDING 710

6

COOLING TOWERS 712 & 713

7

ANALYTICAL RESULTS

8

INSPECTOR'S CERTIFICATES

2

ASBESTOS CHARACTERIZATION REPORT

**BUILDINGS 776 & 777
SECONDARY BUILDINGS**

**ROCKY FLATS ENVIRONMENTAL
TECHNOLOGY SITE**

GOLDEN, COLORADO

Prepared By:

**Foothills Environmental, Inc.
2801 Youngfield St., Ste. 300
Golden, CO 80401**

ACRONYMS

ACM	Asbestos Containing Material
ACBM	Asbestos Containing Building Material
AIHA	American Industrial Hygiene Association
CDPHE	Colorado Department of Public Health & Environment
EPA	Environmental Protection Agency
ND	None Detected
NVLAP	National Voluntary Laboratory Accreditation Program
PACM	Presumed Asbestos Containing Material
TSCA	Toxic Substances Control Act
TSI	Thermal System Insulation

EXECUTIVE SUMMARY

An asbestos inspection was conducted by Foothills Environmental, Inc at Rocky Flats Environmental Technology Site (RFETS) located approximately fifteen miles north of Golden, Colorado. The inspection was conducted by Mr Andre Gonzalez, a Certified Asbestos Inspector in the State of Colorado. The inspection was performed in the secondary buildings of Building 776 and 777. Physical assessment asbestos containing materials has been omitted from this report since the intent is decommissioning and demolition. At the request of building management, the following secondary buildings were inspected:

- 701
- 702
- 703
- 710
- 712
- 713

The intent of this inspection was to locate and sample all suspect asbestos containing materials and identify the locations of asbestos-containing materials. Photographs are provided as visual aids for identifying sampled materials and locations.

SCOPE OF WORK

The scope of work for this assessment included the following:

- 1 Visual inspection of the secondary buildings to identify locations of suspect ACM
- 2 Collection of bulk samples of suspect materials in each identified area for analysis by Polarized Light Microscopy (PLM)
- 3 Describe sample results of all sampled materials
- 4 Provide laboratory results from an accredited laboratory
- 5 Quantify the amount of each asbestos containing homogeneous material
- 6 Provide a report

SAMPLING AND ANALYTICAL PROCEDURES

Suspect building materials were grouped onto homogeneous areas based on their physical characteristics, color, texture, and application. Suspect materials were divided into one of three categories based on the following homogeneous area classification scheme recognized by regulatory agencies (i.e., EPA and CDPH&E):

- 1 Thermal systems insulation (TSI) – any type of pipe, boiler, tank or flue insulation
- 2 Surfacing material – sprayed or troweled onto structural building member
- 3 Miscellaneous – all other suspect materials including floor tiles, ceiling tiles, linoleum, other insulation, finishing materials, etc

Random bulk samples were collected according to the guidelines published as Environmental Protection Agency Final Rule Title II of the Toxic Substances Control Act (TSCA), 15 USC, Sections 2641 through 2654 and in compliance with 40 CFR Part 763, and the CDPH&E Regulation #8. All samples were analyzed by Reservoirs Environmental Services, an NVLAP and AIHA accredited laboratory. Core samples were collected and placed in containers for delivery to Building 881 for on-site analysis by Reservoirs Environmental Services. All samples were released for analysis by chain of custody. Samples collected were given unique identification numbers assigned by the accredited Asbestos Inspector for tracking purposes. A copy of the analytical results is attached.

All bulk samples collected were analyzed utilizing the Environmental Protection Agency's Interim Method for the Detection of Asbestos in Bulk Insulation Samples (EPA 600/M4-82020, December 1982) and the McCrone Research Institute's The Asbestos Particle Atlas as method reference

For the purpose of this report, any material containing greater than one percent asbestos is considered asbestos containing material (ACM)

BUILDING 701

Building 701 has a metal frame structure and a concrete foundation. The roof and exterior panels are sheet metal. The following table summarizes the materials sampled and the analytical results.

Sample Number	Sample Description	Sample Location	Sample Results
701-12132000-05-001	TSI - straight section on domestic water	Bathroom	None Detected
701-12132000-05-002	TSI - hard packed elbow, domestic water	Bathroom	7% Chrysotile, 3% Amosite
701-12132000-05-003	TSI - hard packed elbow, domestic water	Bathroom	7% Chrysotile, 3% Amosite
701-12132000-05-004	TSI - hard packed elbow, condensate steam	SE corner by fire riser	5% Chrysotile, 5% Amosite
701-12132000-05-005	TSI - hard packed elbow, condensate steam	SE corner by fire riser	5% Chrysotile, 5% Amosite
701-12132000-05-006	Ceiling tile - 2' x 4' white speckle	SE corner by fire riser	None Detected
701-12132000-05-007	Ceiling tile - 2' x 4' white long groove	SE corner by fire riser	None Detected
701-12132000-05-008	Drywall tape & joint compound	SE corner by fire riser	3% Chrysotile, Pt. Count - 2 25%
701-12132000-05-009	Base cove - brown, with brown/yellow mastic	SE corner by fire riser	Trace Chrysotile, Pt. Count - trace
701-12132000-05-010	Drywall tape & joint compound	Conference room - by exit door	2% Chrysotile, Pt. Count - trace Trace tremolite
701-12132000-05-011	Drywall tape & joint compound	South wall of office area	None Detected
701-12132000-05-012	Ceiling tile - 2' x 4' white speckle	Office 102	None Detected

Based on the analytical results, the following materials are considered asbestos containing:

- Hard packed elbows on thermal system insulation - steam and water
- Drywall tape and joint compound

Materials that are considered non-asbestos containing include:

- Ceiling tile - two different types sampled
- Base cove and mastic

Photographs of the sampled materials are provided.

Building 701

701-12132000-05-001

(Elbow, Hard Pack, Domestic Water, Restroom)

Frame #36

001215 Asbestos.pdf

701-12132000-05-002

(Elbow, Hard Pack, Domestic Water, Restroom)

Building 701

001215745bcstos.Ppt.5

Frame 35

Building 701

701-12132000-05-003

(Elbow, Hand Pick, Domestic Water, Restroom)

Frame #34

701-15ASbestos.pl

Building 701

General Area View
701-12132000-05-001, -002, &-003
(Domestic Water Restroom)

0012132000-05-001.tif

Frame #37

Building 701

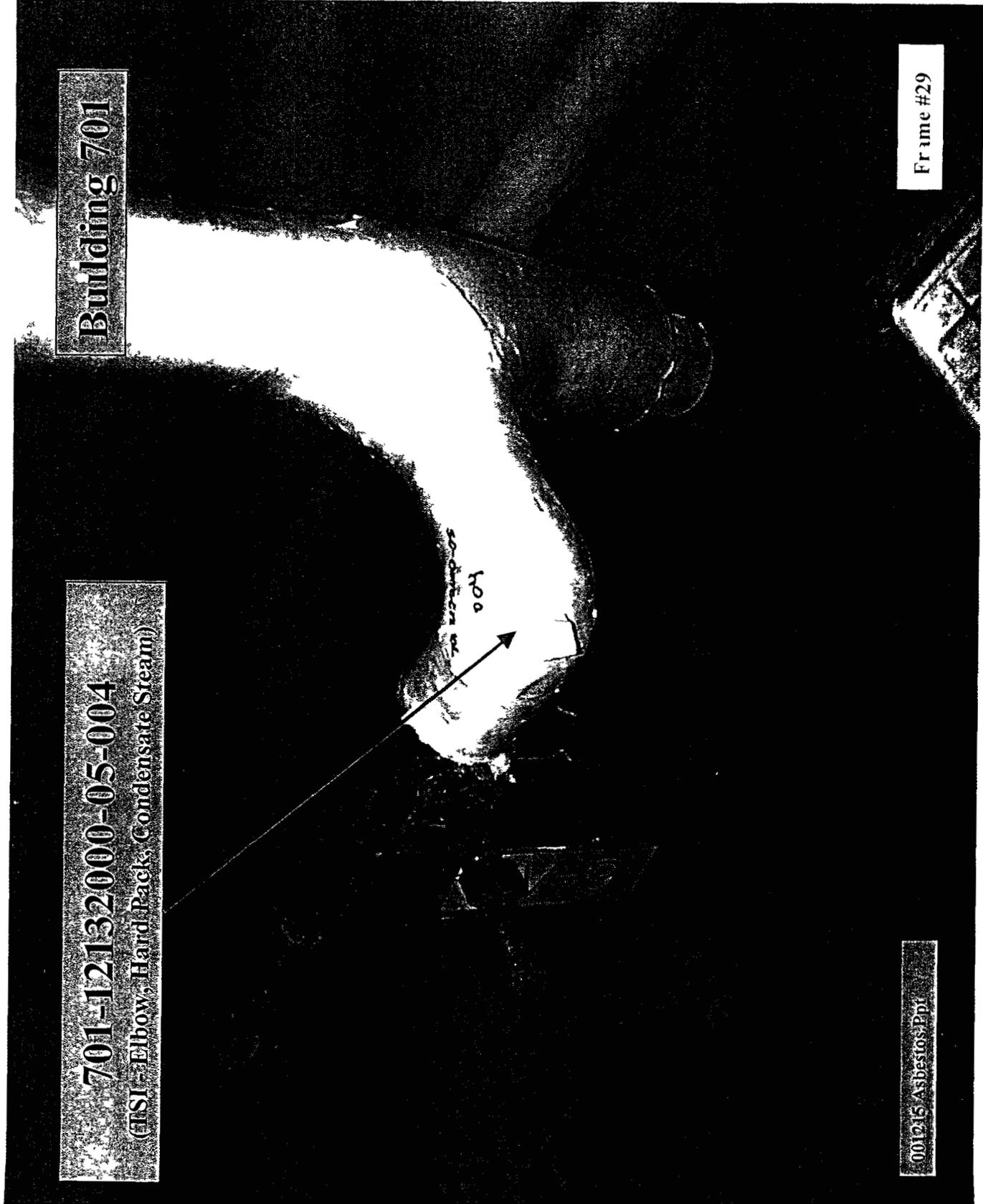
701-12132000-05-004

(FISI - Elbow, Hard Pack, Condensate Steam)

701
FISI

Frame #29

001215 Asbestos Ppl



Building 701

701-12132000-05-005

(TSJ I llow, Hard Pack, Condensate Steam)

5000
7012132000-05-005

Frame #28

001215 (Asbestos).pm

Building 701

General Area View

701-12132000-05-004 & -005

Frame #30

001215 Asbestos Ppt



Building 701

701-12132000-05-006
(Ceiling Tile, 2' X 4' White, Speckled)

LAMICOID
UP HIGH
ROOM 100

Frame #41

001215 Asbestos Ppl

Building 701

701-12132000-05-007

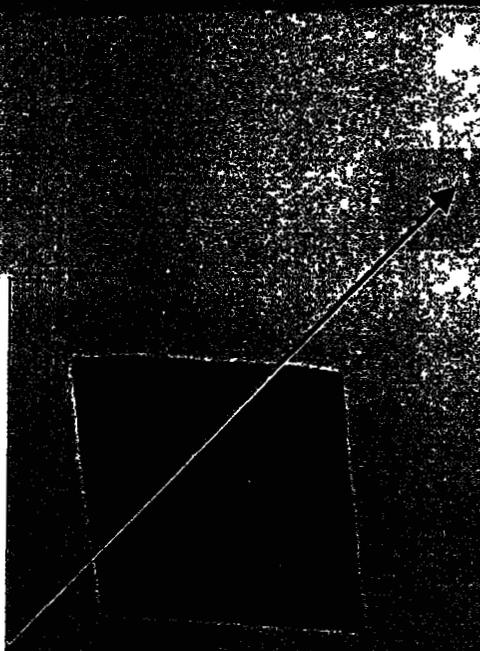
(Ceiling Tile, 2' X 4' White, Speckled)

Frame #42

001215 Asbestos/HPG

Building 701

701-12132000-05-008
(Dry wall, Tape & Joint Compound, Coic)



7012132000 05008

Frame #27

001213 Asbestos/Pipe

Building 701

Frame #40

701-12132000-05-009

(Brown Coxc Base, & Yellow/Brown Mastic)

WALSH
PLUMBING
FACTORY

h
c
r
o
l
l

001215 Asbestos Ppt

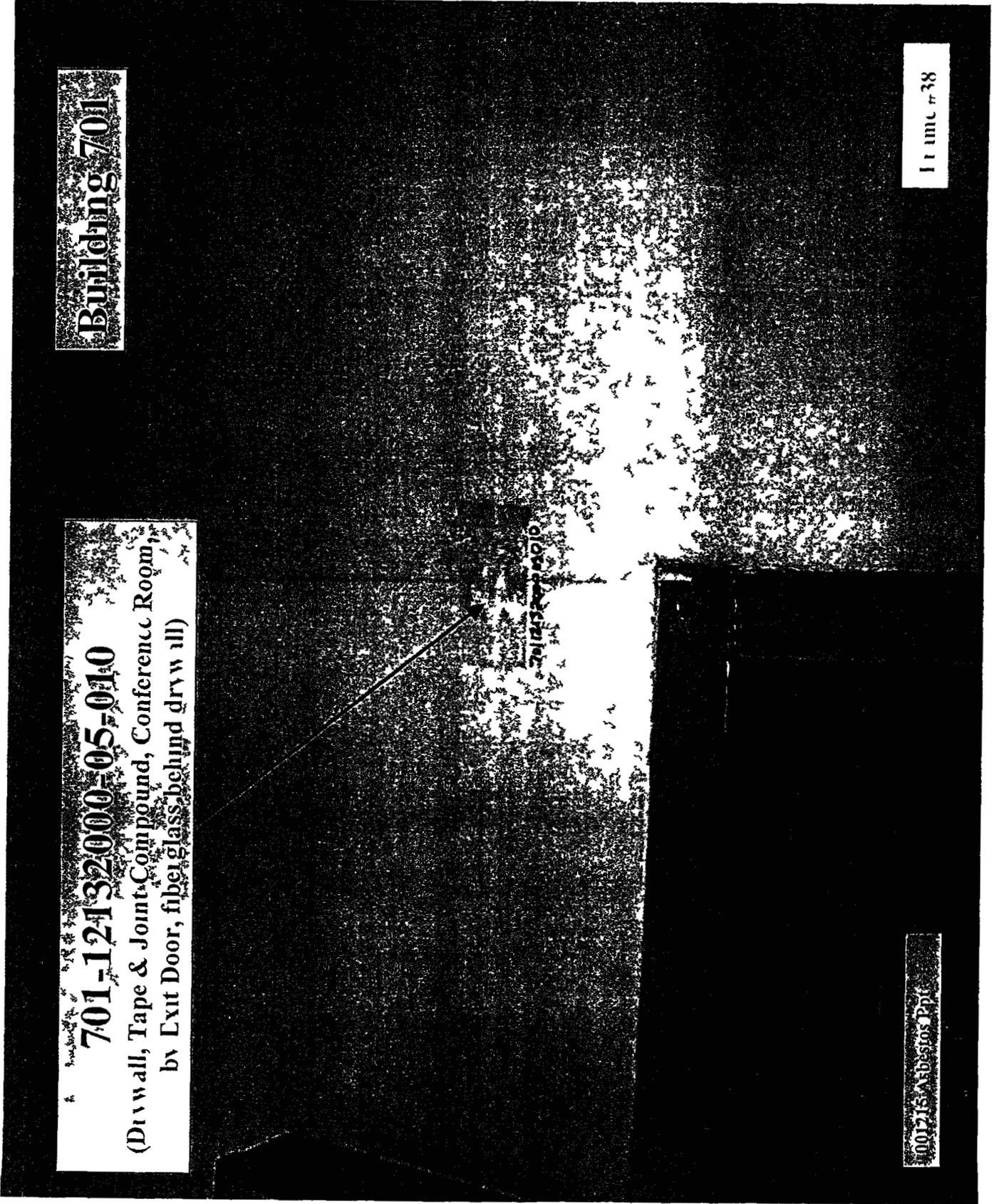
Building 701

701-12132000-05-010

(Drywall, Tape & Joint Compound, Conference Room,
by Exit Door, fiber glass behind dry wall)

ITMC #38

001215 Asbestos Ppt



Building 701

General Area View
701-12132000-05-010
(Dry wall, Tapc & Joint Compound, Conference Room
by Lxit Door, fiberglass behind drywall)

EXIT

Frame 3)

0012132000-05-010

Building 701

701-12132000-05-011
(Drywall, Japc & Joint Compound; South
Wall off Office Area)

Frame #31

001213-Asbestos.Ppt

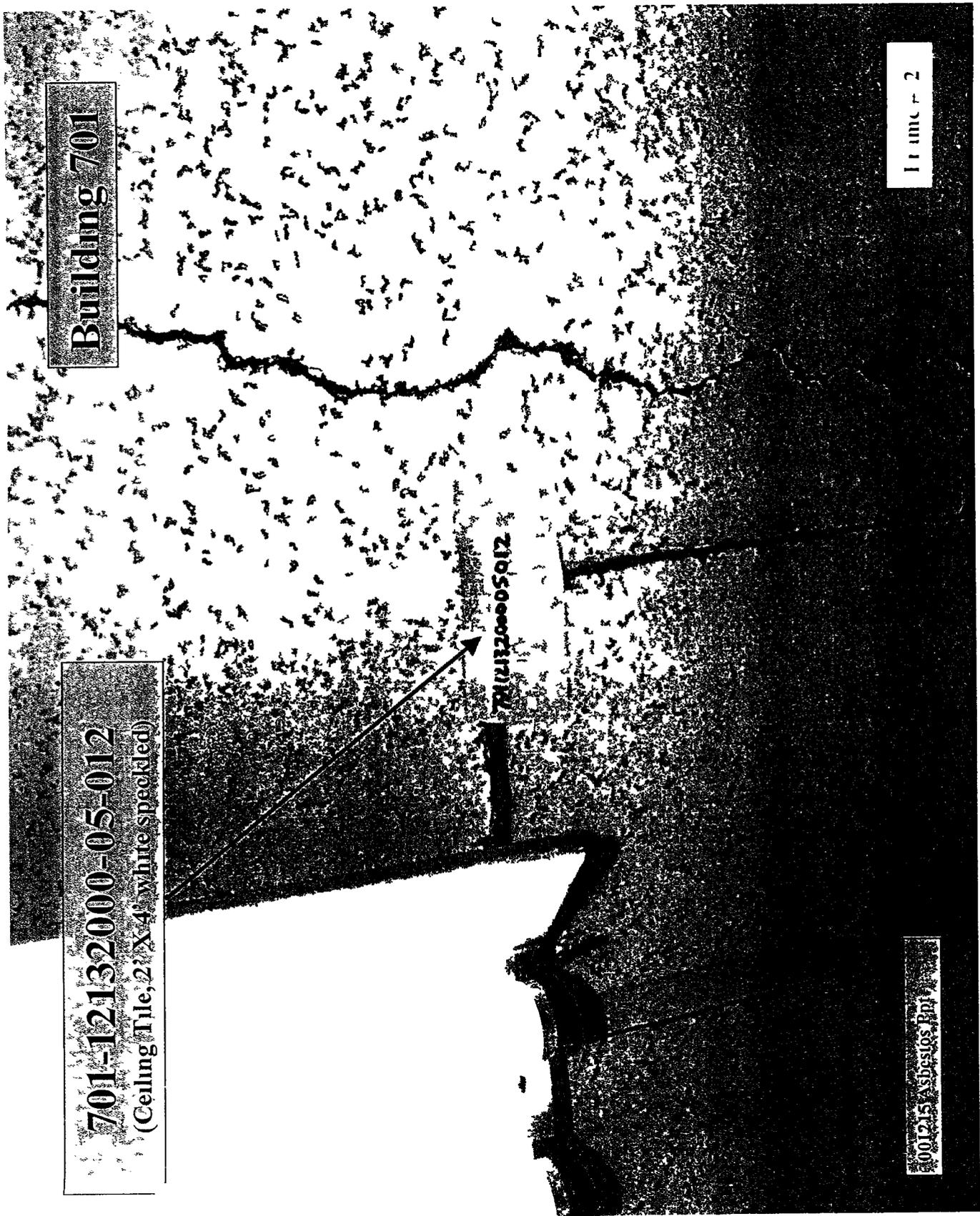
Building 701

701-12132000-05-012
(Ceiling Tile, 2' X 4' White speckled)

701-12132000-05-012

Frame 2

001215 Asbestos Ppt



Building 701

General Area View

701-12132000-05-012

(Ceiling Tile, 2' X 4' white speckled)

001215 Asbestos/Ppr

Frame #33

BUILDING 702

Building 702 has a steel frame and a concrete foundation. The following table summarizes the material sampled and the analytical results.

Sample Number	Sample Description	Location	Analytical Results
0212100005001	Pack of fiberglass	NE	Negative
0212100000002	Pack of fiberglass	SE	Negative
0212100000003	Pack of fiberglass	North Wall	Negative
0212100005004	ISI hard pack drill	North Wall	Chrysolite Asbestos
0212100000000	ISI	North Wall	Chrysolite Asbestos

The ISI on the condensate steam line running along the north wall is fiberglass ISI around elbow or asbestos containing. The TSI associated with the heater unit in the northeast corner is asbestos containing including the straight sections. The TSI around the furnace in the southeast corner is considered fiberglass and was not sampled.

Photographs of the sampled materials are provided.

Building 702

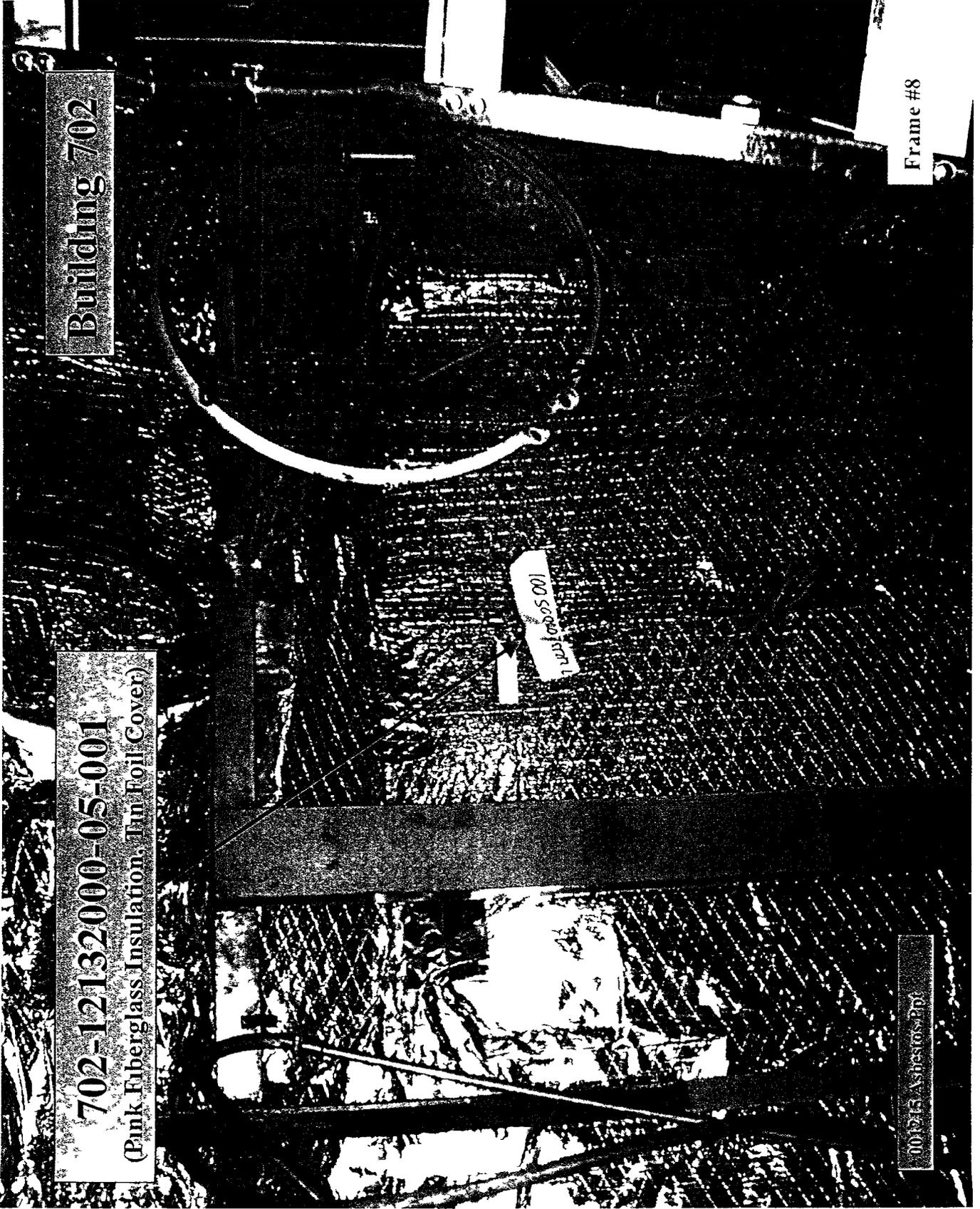
702-12132000-05-001

(Pink Fiberglass Insulation, Tin Foil Cover)

0012132000

Frame #8

001213 Asbestos-Dip



Building 702

Frame #9

General Area View

702-12132000-05-001

(Pink Fiberglass Insulation, Tin-Foil Cover)

001215Ashrestrosi.Ppt

Building 702

702-12132000-05-002

(Pink Fiberglass Insulation, Tin Foil Cover)

Frame #10

001217 Asbestos, 2017



General Area View

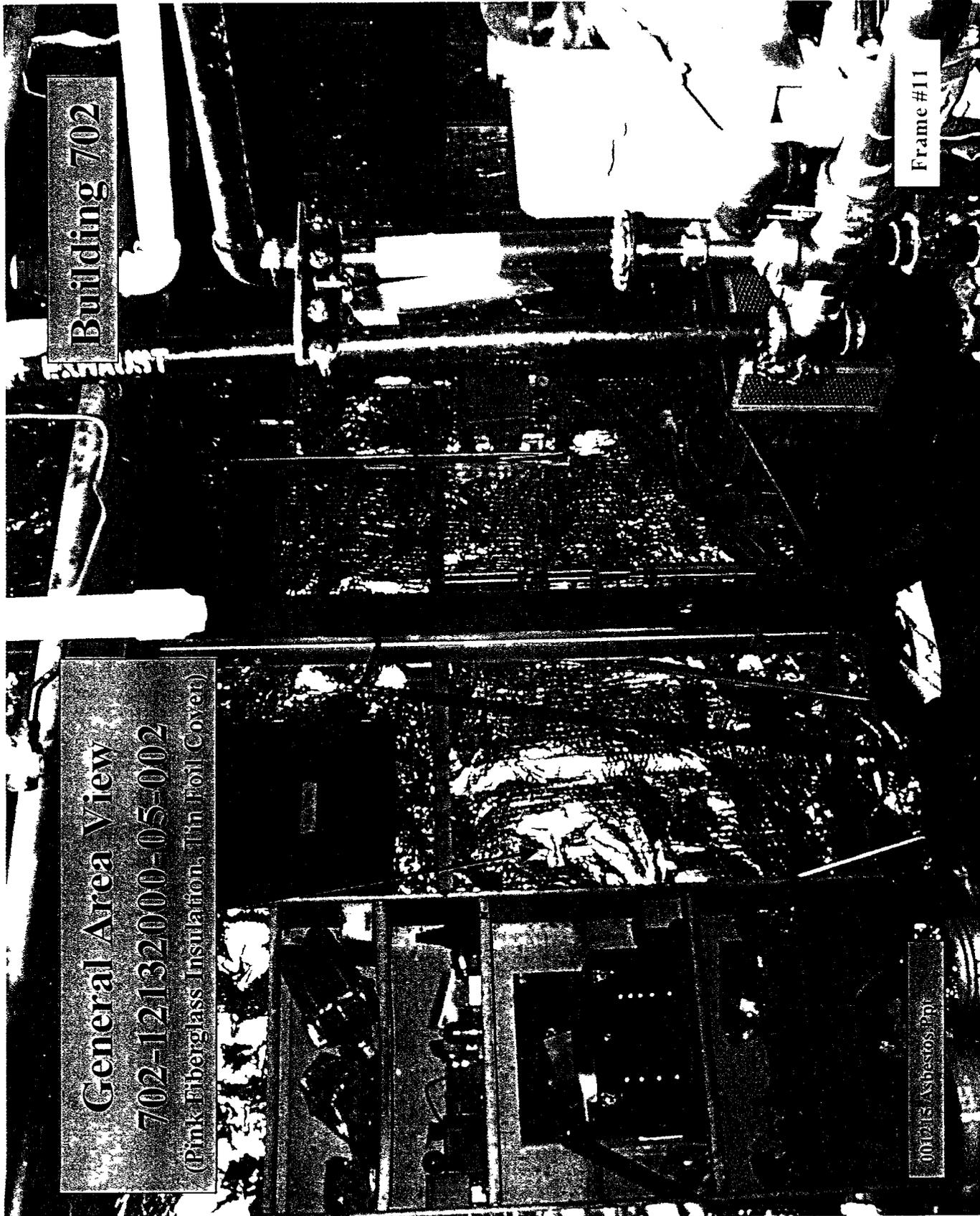
702-12132000-05-002

(Pink Fiberglass Insulation, Tin Foil Cover)

001215 Asbestos Ppt

Building 702

Frame #11



Building 702

702-12132000-05-004
(Elbow, Hard Packed)

702-12132000
500
↑

Frame #12

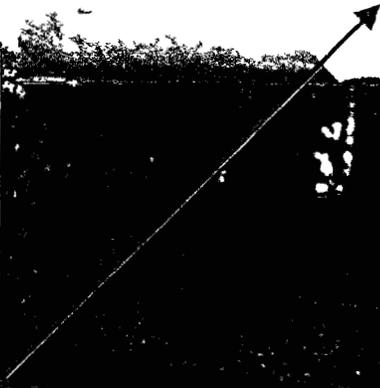
001215 Asbestos Ppt

Building 702

Frame #13

702-12132000-05-005
(Straight Run, Hard Packed)

702 1213
2000 0500



YGIENE
IPES

001213 ASBESTOS-200

BUILDING 703

Building 703 has a steel frame and concrete foundation. Exterior panels are sheet metal with fiberglass insulation lining the interior walls. The following table summarizes the materials sampled and the analytical results.

Sample Number	Sample Description	Sample Location	Analytical Result
703-12132000-05-001	Pink fiberglass insulation, tin foil	South wall, east end	None Detected
703-12132000-05-002	Pink fiberglass insulation, tin foil	South wall, center	None Detected
703-12132000-05-003	Pink fiberglass insulation, tin foil	East wall, by door	None Detected
703-12132000-05-004	TSI - hard packed elbow	Center of room	43% Chrysotile, 2% Amosite
703-12132000-05-005	TSI - hard packed elbow	Center of room	25% Chrysotile, 1% Amosite
703-12132000-05-006	TSI - straight run, hard packed	Center of room	5% Chrysotile, 15% Amosite
703-12132000-05-007	TSI - white wrap & mud over fiberglass - on flange	Outside lines	15% Chrysotile, Trace Amosite
703-12132000-05-008	TSI - white wrap & mud over fiberglass - on elbow	Outside lines	5% Chrysotile, 3% Amosite
703-12132000-05-009	TSI - black mud compound over fiberglass insulation	Outside lines	15% Chrysotile
703-12132000-05-010	TSI - straight run on cooling tower	Cooling tower 713	None Detected

Based on the analytical results, the following materials are considered asbestos containing:

- Hard packed elbows and straight sections on TSI
- Exterior caulk/repair compound found on large water lines

Materials that are considered non-asbestos containing include:

- Interior wall insulation - fiberglass
- Soft straight sections on TSI

Photographs of the sampled materials are provided.

40-
20-

Building 703

703-12132000-05-001
(pink wall insulation with tin foil cover,
south wall, east end)

703-12132000-05-001

Frame #22

0012132000-05-001

01R-15317

3 Building 703

703-12132000-05-002

(pink wall insulation with tin foil cover, south wall, center)

302-043

703121320005002

0012/15 Asbestos/Bm

Frame #20

Building 703

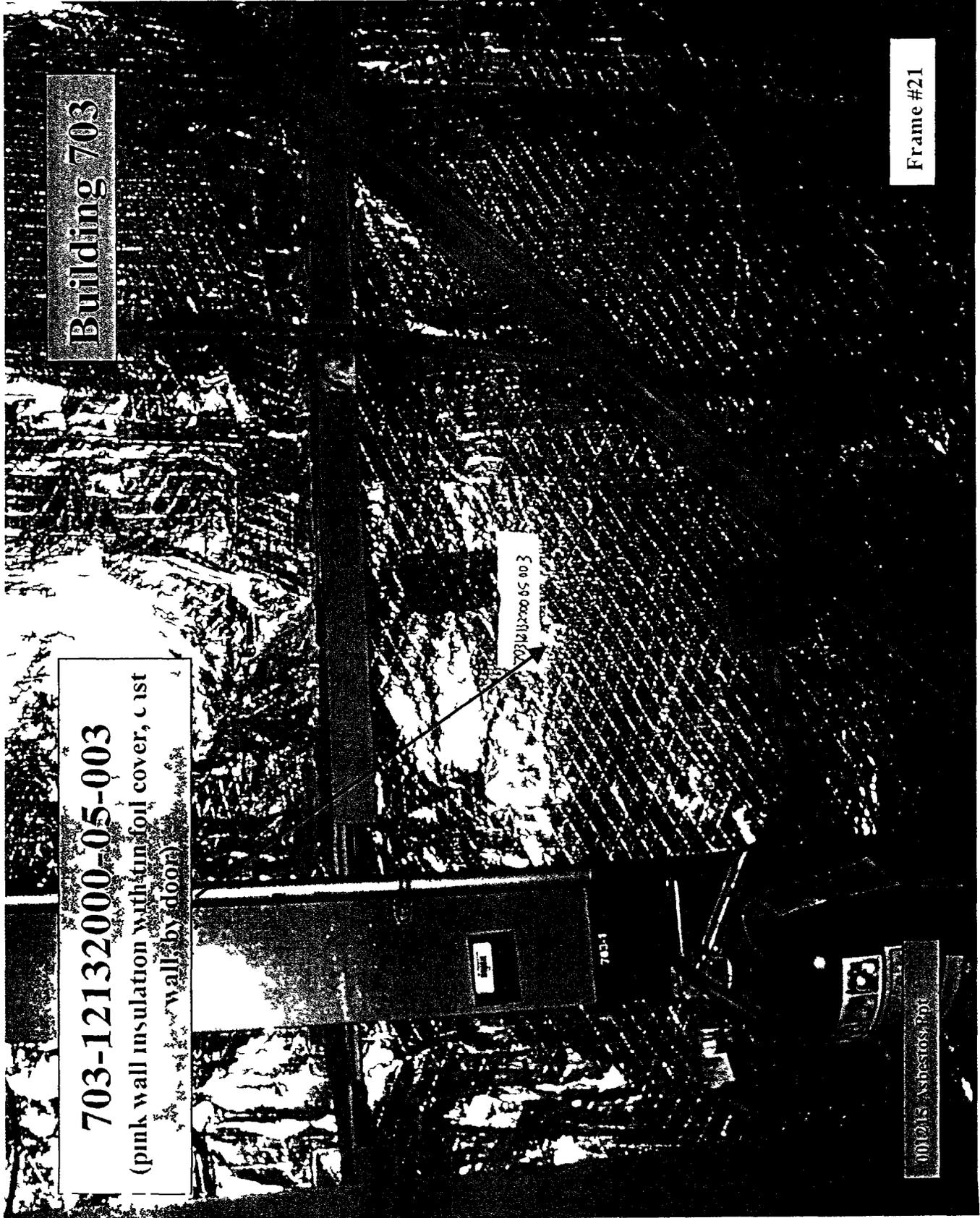
703-12132000-05-003

(pink wall insulation with tin foil cover, cist wall, by door)

7031213200 05 00 3

Frame #21

001215 Asbestos.jpg



Building 703

703-12132000-05-004

(TSI - Elbow, Hard-Pack, Center of Room)

703 12 13 2000 05 004

Frame #23

001213 Asbestos-PPH

Building 703

703-12132000-05-005

(TST - Elbow, Hard Pack, Center of Room)

Frame #24

500
-
E121302

hard pack

001213 Asbestos Ppt



Building 703

General Area View

703-12132000-05-004 & -005

Frame #25

001215 Asbestos.Pdf



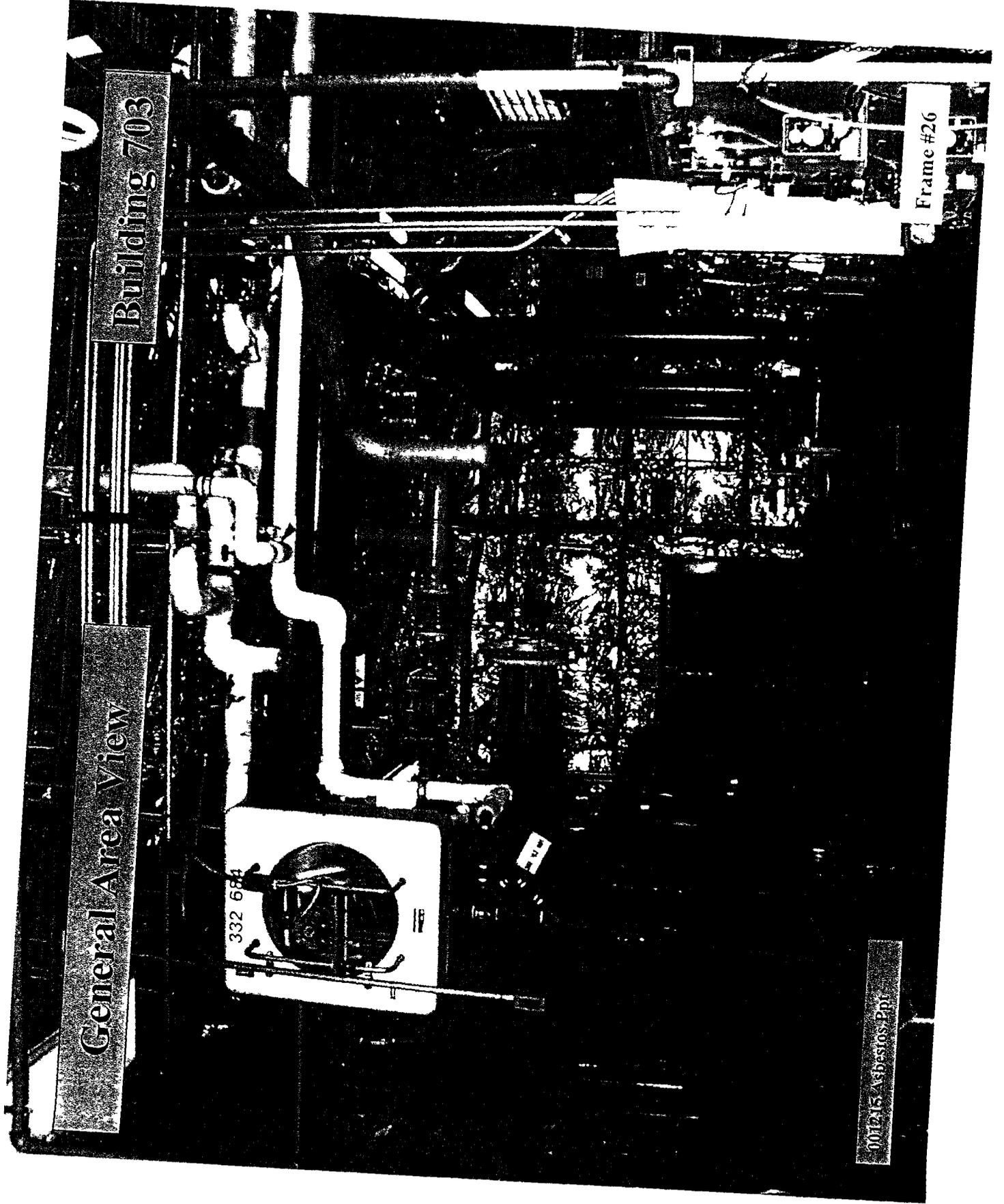
Building 703

Frame #26

General Area View

332 684

001215 Asbestos Ppt



BUILDING 710

Building 710 is steel frame with a concrete foundation. Exterior walls and the roof are sheet metal. Fiberglass insulation covers the interior walls. The fiberglass interior insulation was not sampled based on the inspector's discretion. The following table summarizes the materials sampled and the analytical results.

Sample Number	Sample Description	Sample Location	Analytical Result
710-12132000-05-001	TSI - elbow on large condensate steam line	Across from fixed ladder	Trace Chrysotile, Pt. Count - None Detected
710-12132000-05-002	TSI - elbow on 1-1/2 inch steam line	Beside fixed ladder	None Detected
710-12132000-05-003	TSI - elbow to pressure gauge on 125 steam	Pressure gauge to 125 steam	Trace Chrysotile, Pt. Count - trace
710-12132000-05-004	TSI - flange on 125 steam	125 steam line	Trace Chrysotile, Pt. Count - 0.25%
710-12132000-05-005	TSI - elbow	Center of room	Trace Chrysotile, Pt. Count None Detected
710-12132000-05-006	TSI - block insulation on HP steam	By entrance	None Detected

The thermal system insulation in Building 710 is all less than 1% asbestos containing and is therefore not considered asbestos containing material. No other suspect asbestos containing materials were observed.

Photographs of the sampled materials are provided.

Building 710

710-12132000-05-001
(TST - Elbow on large Steam
Condensate)

000005 - 4/18/2000 - 200

Frame #2

710-12132000-05-001

Building 710

710-12132000-05-002
(TSI - Elbow on 1 1/2" Steam Line)

710132000 05
-002

Frame #4

001215 (Asbestos) Pipe

Building 710

710-12132000-05-003
(TST - Elbow on 125lb Steam at
Pressure Gage)

7101213
2000
45
003

001215 Asbestos Ppr

Frame #5

Building 710

710-12132000-05-004

(FSI - Flange on 125 psi Steam,
Hard Section)

10/23/00
05-004



Frame #3

001213200005004

Building 710

710-12132000-05-005
(TSL - Elbow at Center of Room)



710121320005

Frame #6

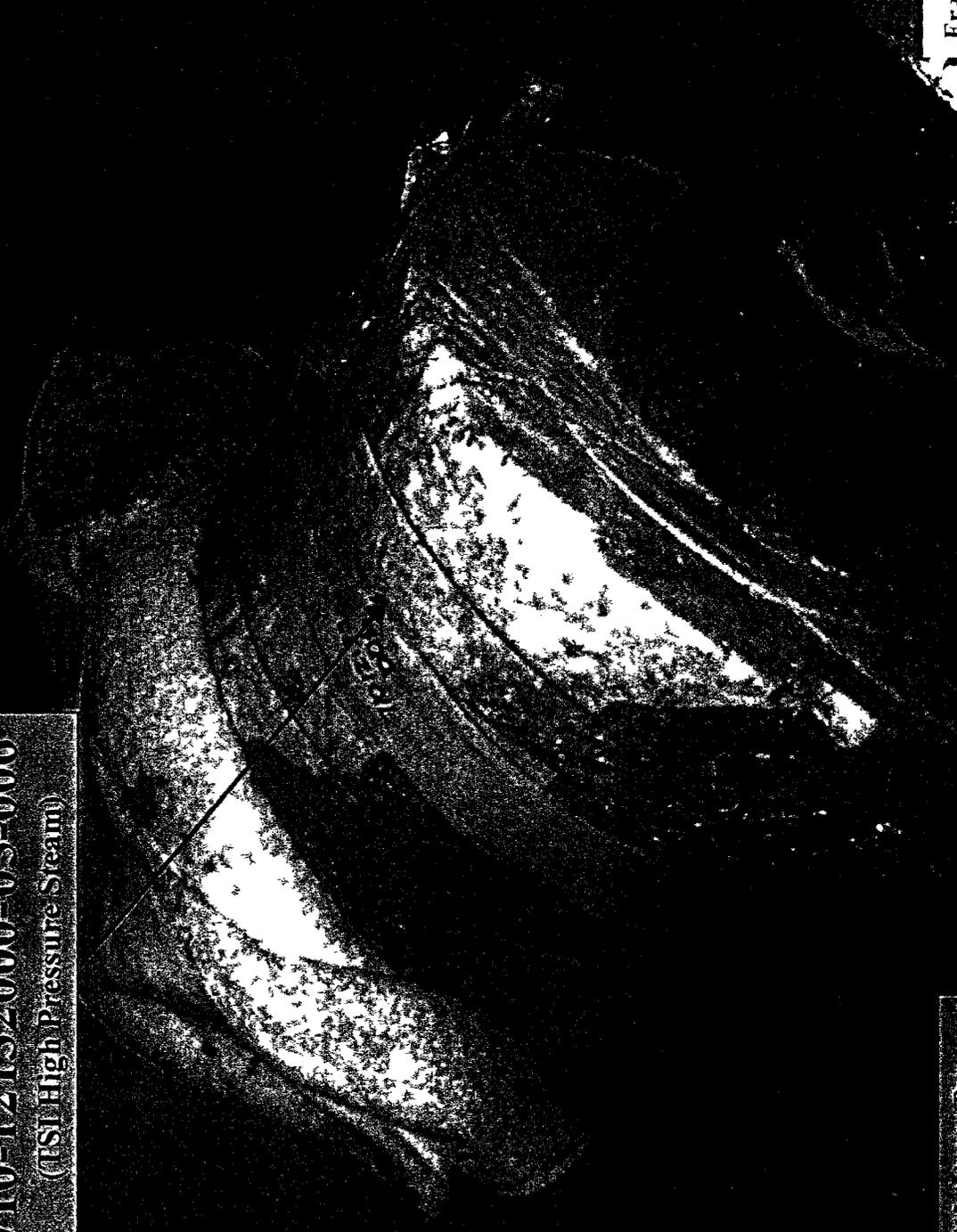
001215 Asbestos Pap

Building 710

710-12132000-05-006
(High Pressure Steam)

Frame #1

001/215 - Anestros Ppt

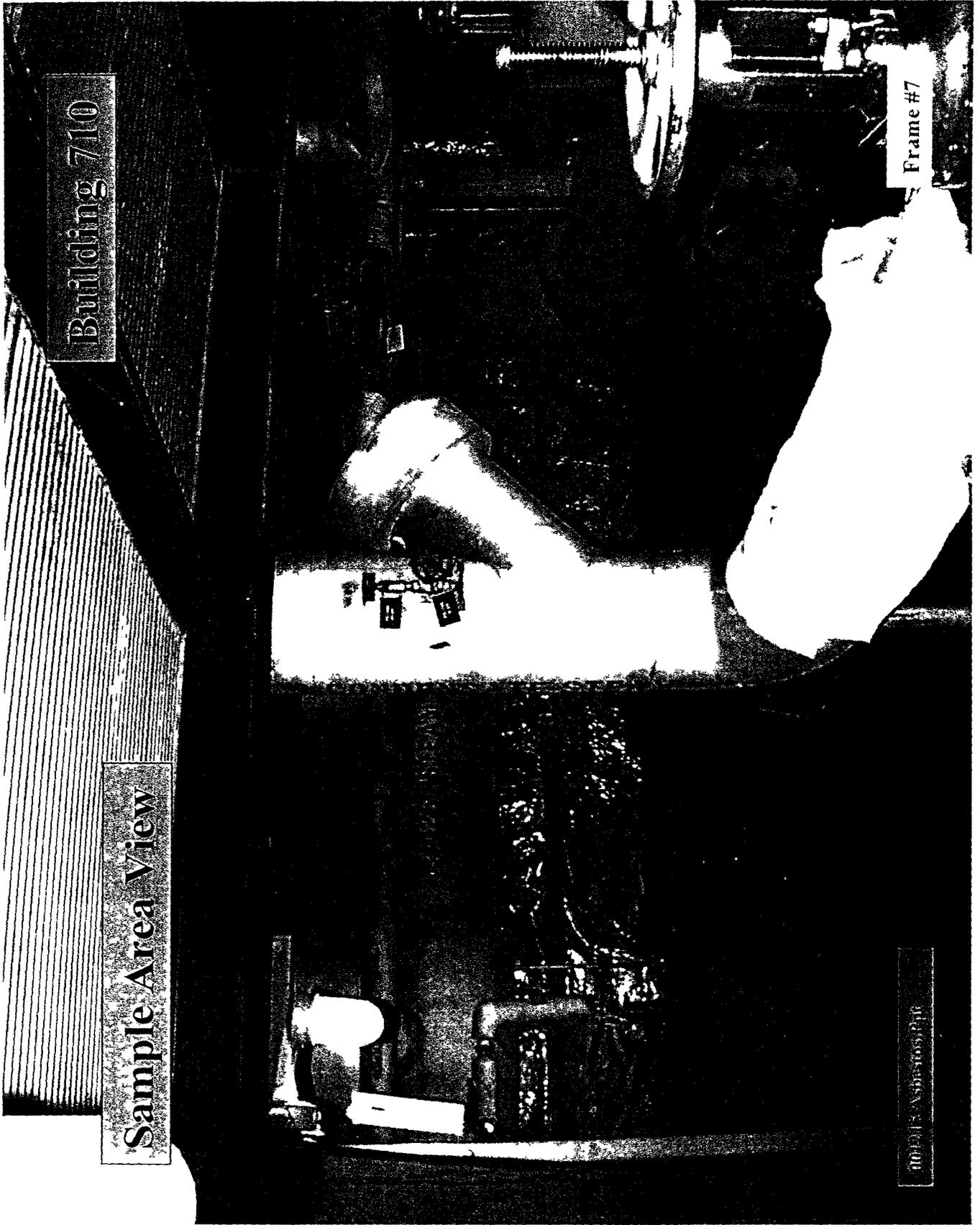


Building 710

Sample Area View

Frame #7

60EAL3A8B8055.P4E



COOLING TOWERS 712 & 713

Cooling Towers 712 and 713 are located directly north of buildings 702 and 703 respectively. The towers have concrete foundations with wood framing. The baffles on the towers are fiberglass. Suspect TSI was sampled on Cooling Tower 713 in association with Building 703. The existing pipe insulation attached to the tower is wrapped in a metal jacket and is not asbestos containing (Sample 703-12132000-05-010). Samples of caulk/repair compound found on the large water lines between the two Cooling Towers were also sampled and found to be asbestos containing (Samples 703-12132000-05-007, 703-12132000-05-008 & 703-12132000-05-009). No other suspect asbestos containing materials were identified.

Sample Number	Sample Description	Sample Location	Analytical Result
703-12132000-05-007	TSI - white wrap & mud over fiberglass - on flange	Outside lines	15% Chrysotile, Trace Amosite
703-12132000-05-008	TSI - white wrap & mud over fiberglass - on elbow	Outside lines	5% Chrysotile, 3% Amosite
703-12132000-05-009	TSI - black mud compound over fiberglass insulation	Outside lines	15% Chrysotile
703-12132000-05-010	TSI - straight run on cooling tower	Cooling tower 713	None Detected

Photographs of the sampled materials are provided

Building 703

703-12132000-05-007

(Flange, white, wrapped and mudded,
exterior cooling tower water line)

LAB 80007 212120L

Frame #15

001215 Asbestos.P01

Building 703

703-12132000-05-008

(Elbow, white, wrapped and mudded over fiberglass, exterior cooling tower water line)

703/2134

Frame #16

0012/15 Asbestos Ppt

Building 703

Frame #17

703-12132000-05-009

(Valve Flange, black mud compound over fiberglass)

001213 Asbestos.Ppt



Building 703

703-12132000-05-010

(fiberglass with metal jacket, straight run
exterior cooling tower water line)

703-12132000-05-010

Frame #18

001215 Asbestos.Ppt

Building 703

Frame #19

General Area View

703-12132000-05-010

(fiberglass with metal jacket, straight run
exterior cooling tower waterline)

0012132000-05-010

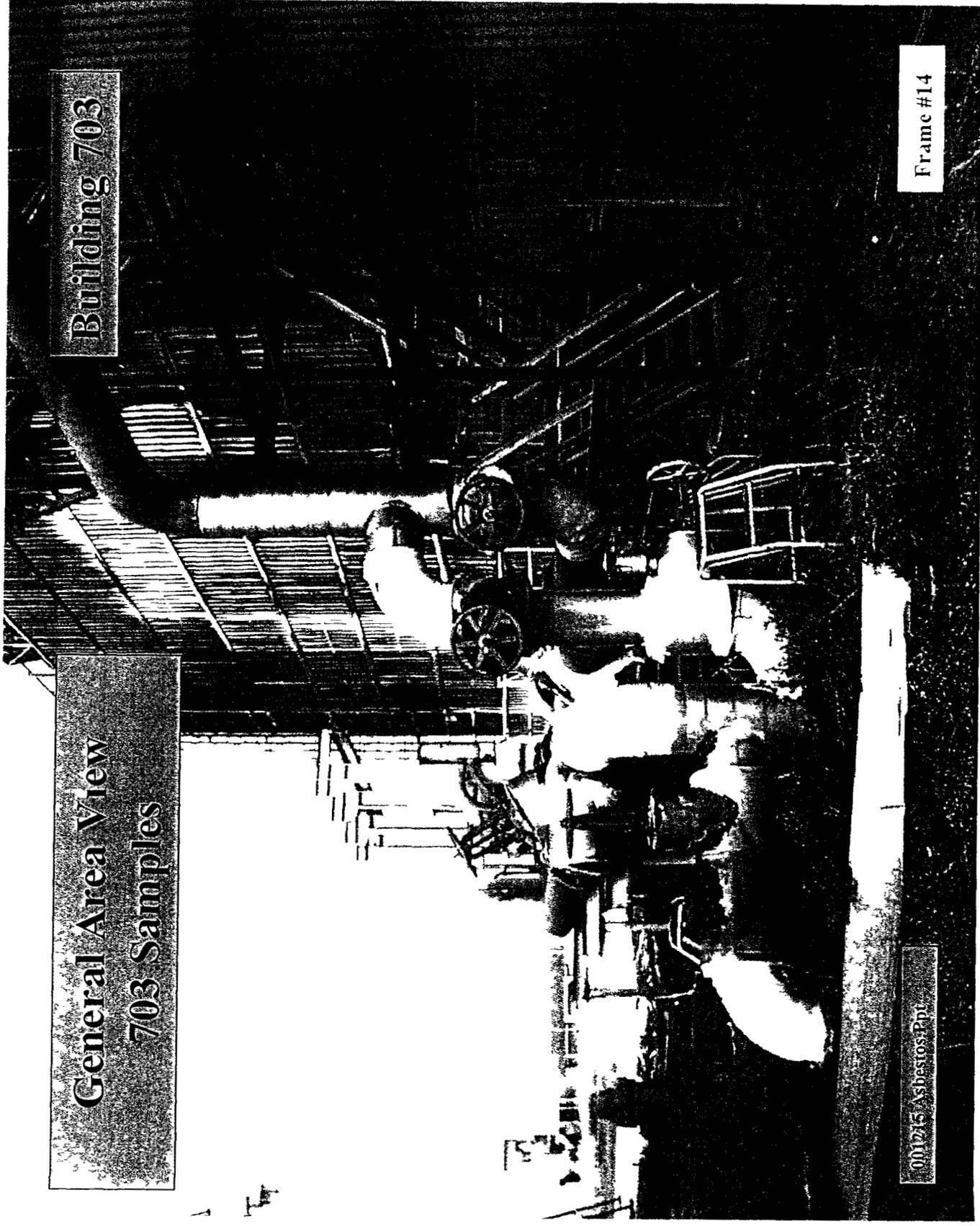


Building 703

General Area View
703 Samples

Frame #14

001215 Asbestos.Ppt



ANALYTICAL RESULTS

RESERVOIRS ENVIRONMENTAL SERVICES, INC.
 NVLAP Accredited Laboratory #101896 TDH 30-0136

TABLE 1 PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 74391-1&2
 Client: Kaiser-Hill Analytical Services Division
 Client Project: 00C0050/DAA00009, On-Site Sample Analysis, A. Gonzales
 Date Samples Received: December 27, 2000
 Analysis Type: PLM Short Report, Bulk
 Turnaround: 24 Hour

Client Sample Number	Lab ID Number	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER		Non-Fibrous Components (%)
				Mineral	Visual Estimates (%)	
710-1213200005-001	EM 519626	A White paint w/white fibrous woven material	8		ND	60
		B White fibrous plaster	42	Chrysotile	TR	80
		C Gold fibrous material	50	Point Count	ND	10
710-1213200005-002	EM 519627	A White/tan wrap	10		ND	20
		B White paint w/white fibrous woven material	40		ND	60
		C White fibrous plaster	50		ND	80
710-1213200005-003	EM 519628	A White paint w/white fibrous woven material	30		ND	60
		B White fibrous plaster	70	Chrysotile	TR	80
710-1213200005-004	EM 519629	A White paint w/white fibrous woven material	25		ND	60
		B White fibrous plaster	75	Chrysotile	TR	80
710-1213200005-005	EM 519630	A White paint w/white fibrous woven material	8		ND	60
		B White fibrous plaster	92	Chrysotile	TR	80

ND = None Detected
 TR = Trace, < 1% Visual Estimates
 Point Count Trace = Observed but not countable under protocol, < 0.25%
 Analytic PDI
 Data

55

RESERVOIRS ENVIRONMENTAL SERVICES, INC.
 NVLAP Accredited Laboratory #1898 TDH 30-0136

TABLE I PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 74391-1&2
 Client: Kaiser-Hill Analytical Services Division
 Client Project: 00C0050/DAA00009, On-Site Sample Analysis, A. Gonzales
 Date Samples Received: December 27, 2000
 Analysis Type: PLM Short Report, Bulk
 Turnaround: 24 Hour

Client Sample Number	Lab ID Number	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER		Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)	
710-1213200005-008	EM 519631	A White fibrous plaster	100	ND	ND	85
701-1213200005-001	EM 519632	A Black tar	5	ND	ND	100
		B Silver wrap w/white & green paint	20	ND	ND	65
		C Gold fibrous material	75	ND	ND	10
701-1213200005-002	EM 519633	A White fibrous woven material w/white & green paint	20	ND	ND	35
		B White fibrous plaster	80	7	3	60
701-1213200005-003	EM 519634	A White fibrous woven material w/white & green paint	20	ND	ND	35
		B White fibrous plaster	80	7	3	60
701-1213200005-004	EM 519635	A White fibrous woven material w/white paint	20	ND	ND	30
		B White fibrous plaster	80	5	5	60
701-1213200005-005	EM 519636	A White fibrous woven material w/white paint	20	ND	ND	30
		B White fibrous plaster	80	8	2	60

PLM Data QA

Trace-Act = Tremolite-Actinolite
 Point Count Traces = Observed but not countable under protocol, < 0.25%

ND = None Detected
 TR = Trace, < 1% Visual Estimate

RESERVOIRS ENVIRONMENTAL SERVICES, INC.
 NVLAP Accredited Laboratory #1896
 TDH 30-0136

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 74391-1&2
 Client: Kaiser-Hill Analytical Services Division
 Client Project: 00C0050/DAA-00009, On-Site Sample Analysis, A. Gonzales
 Date Samples Received: December 27, 2000
 Analysis Type: PLM Short Report, Bulk Turnaround
 Turnaround: 24 Hour

Client Sample Number	Lab ID Number	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
701-1213200005-006	EM 519637	A White/gray ceiling tile	100	ND	ND	70	30
701-1213200005-007	EM 519638	A White/tan ceiling tile	100	ND	ND	75	25
701-1213200005-008	EM 519639	A White/green paint	5	ND	ND	0	100
		B White tape	7	ND	ND	98	2
		C White mud	88	3	25	0	97
701-1213200005-009	EM 519640	A Tan mastic	3	TR	TR	0	100
		B Black cove	97	TR	TR	0	100
701-1213200005-010	EM 519641	A White tape	5	ND	ND	98	2
		B White mud w/white & yellow paint	10	2	0.75	0	98
		C White/tan drywall	85	TR	TR	15	85
701-1213200005-011	EM 519642	A White paint	3	ND	ND	0	100
		B White mud	5	ND	ND	0	100
		C White tape	7	ND	ND	98	2
		D White/tan drywall	85	ND	ND	0	100

ND = None Detected
 TR = Trace, < 1% Visual Estimate
 Trans-Act = Transmittance-Actinofluorescence
 Point Count Trace = Observed but not countable under protocol, < 0.25%
 POC Data CA

57

RESERVOIRS ENVIRONMENTAL SERVICES, INC.
 NVLAP Accredited Laboratory #1896 TDH 30-0136

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 74391-1&2
 Client: Kaiser-Hill Analytical Services Division
 Client Project: 00C0050/DAA00009, On-Site Sample Analysis, A Gonzales
 Date Samples Received: December 27, 2000
 Analysis Type: PLM Short Report, Bulk
 Turnaround: 24 Hour

Client Sample Number	Lab ID Number	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER		Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)	
701-1213200005-012	EM 519643	A White/gray ceiling tile	100	70	ND	30
702-1213200005-001	EM 519644	A Silver/tan wrap	6	50	ND	50
		B Pink fibrous material	94	93	ND	7
702-1213200005-002	EM 519645	A Silver/tan wrap	6	50	ND	50
		B Pink fibrous material	94	93	ND	7
702-1213200005-003	EM 519646	A Silver/tan wrap	6	50	ND	50
		B Pink fibrous material	94	93	ND	7
702-1213200005-004	EM 519647	A Pink resinous material	5	0	ND	100
		B White fibrous woven material w/yellow paint	7	90	ND	10
		C White fibrous plaster	88	32	5	60
702-1213200005-005	EM 519648	A White fibrous plaster w/white fibrous woven material & yellow paint	100	5	5	75
				15		
703-1213200005-001	EM 519649	A Silver/tan wrap	8	50	ND	50
		B Pink fibrous material	92	93	ND	7

ND = None Detected
 TR = Trace, < 1% Visual Estimate
 Trem-Ac = Tremolite-Actinolite
 Point Count Traces = Observed but not countable under protocol, < 0.25%
 PDL Data DA

RESERVOIRS ENVIRONMENTAL SERVICES, INC.
 NVLAP Accredited Laboratory #1896 TDH 30-0138

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 74391-1&2
 Client: Kaiser-Hill Analytical Services Division
 Client Project: 00C060/DAAA00009, On-Site Sample Analysis, A. Gonzales
 Date Samples Received: December 27, 2000
 Analysis Type: PLM Short Report, Bulk Turnaround, 24 Hour

Client Sample Number	Lab ID Number	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER		Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)	
703-1213200005-002	EM 519650	A Silver/tan wrap	6		ND	50
		B Pink fibrous material	94		ND	93
703-1213200005-003	EM 519651	A Silver/tan wrap	6		ND	50
		B Pink fibrous material	94		ND	93
703-1213200005-004	EM 519652	A White/tan fibrous material w/white & tan fibrous woven material	100	Chrysotile	43	15
703-1213200005-005	EM 519653	A White fibrous plaster w/white fibrous woven material & clear resin	100	Amosite	2	40
		A White fibrous plaster w/white fibrous woven material & clear resin	100	Chrysotile	25	34
703-1213200005-006	EM 519654	A White fibrous plaster w/white fibrous woven material & clear resin	100	Amosite	1	40
		A White fibrous plaster w/white fibrous woven material & clear resin	100	Chrysotile	5	3
703-1213200005-007	EM 519655	A White paint	15	Chrysotile	TR	5
		B Yellow fibrous material	20		ND	85
		C White fibrous woven material	30		ND	90
		D Black tar w/white fibrous plaster	35		15	5
				Chrysotile	TR	80

03/17/01

ND = None Detected
 TR = Traces, < 1% Visual Estimate
 Trem-Ac = Tremolite-Actinolite
 Point Count Trace = Observed but not countable under protocol, < 0.25%

59

RESERVOIRS ENVIRONMENTAL SERVICES, INC.
 NVLAP Accredited Laboratory #1896 TDH 30-0136

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number RES 74391-1&2
 Client Kaiser-Hill Analytical Services Division
 Client Project OOC0050/DAA00009, On-Site Sample Analysis, A. Gonzales
 Date Samples Received December 27, 2000
 Analysis Type PLM Short Report, Bulk
 Turnaround 24 Hour

Client Sample Number	Lab ID Number	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
703-1213200005-008	EM 519656	A Yellow fibrous material	5	Chrysotile	TR	85	15
		B White paint	7	Amosite	TR	1	99
		C White fibrous woven material	18	Chrysotile	TR	90	10
		D White fibrous plaster	70	Chrysotile	ND	7	85
703-1213200005-009	EM 519657	A Yellow fibrous material	15	Chrysotile	ND	85	15
		B Black tar	85	Chrysotile	15	0	85
703-1213200005-010	EM 519658	A Gray resinous material	TR	Chrysotile	ND	0	100
		B Blue resinous material	1	Chrysotile	ND	0	100
		C Yellow fibrous material	99	Chrysotile	ND	85	15

ND = None Detected
 TR = Traces, < 1% Visual Estimate
 Trem-Act = Tremolite-Actinolite
 Point Count Traces = Observed but not countable under protocol, < 0.25%

QA
 Data QA

60

Rocky Flats Environmental Technology Site

Golden, CO 80402-0464

Safety and Hygiene Chain of Custody Record and Analysis Request

0060050

Name of Originator: <u>A. Gonzalez</u>		Title: <u>TH-15</u>	Bldg/Ext: <u>116/46727</u>	Date: <u>12/27/00</u>	Page of			
SAMPLE NUMBER Bldg/Y/M/D/P#/#	ANALYZE FOR	VOLUME liters	SAMPLE TIME/	MEDIA	P A B	PERSONAL Area BULK	REMARKS	Lab Number
702-12132000-05-001	Asbestos				<input checked="" type="checkbox"/>		TH-02B005	
702-12132000-05-002							Pl. Cont. Trace to 3%	
702-12132000-05-003								
702-12132000-05-004								
702-12132000-05-005								
703-12132000-05-001								
703-12132000-05-002								
703-12132000-05-003								
703-12132000-05-004								
703-12132000-05-005								
703-12132000-05-006								
703-12132000-05-007								
703-12132000-05-008								
703-12132000-05-009								
703-12132000-05-010								
710-12132000-05-001								
Relinquished by <u>[Signature]</u>	Received by <u>R. S. [Signature]</u>	Time/Date <u>12/27/00</u>	Relinquished by	Received by	Time/Date			
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date			
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date			
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date			
Report and Billing Instruction			Analysis Request			Seal/ff (Release #)		
Kaiser-Hill <input checked="" type="checkbox"/>	Verbal To: <u>A. Gonzalez</u>	Industrial Hygiene Sample <input type="checkbox"/>	Condition of Seal <input type="checkbox"/> Broken <input type="checkbox"/> Unbroken			Signature: _____		
RMRS <input type="checkbox"/>	Fax To: <u>6678</u>	Rush <input type="checkbox"/>	Asbestos Samples			Comments: _____		
SSOC <input type="checkbox"/>	Report To: <u>A. Gonzalez</u>	Standard Service <input type="checkbox"/>	24 Rush <input type="checkbox"/>	2 Other <input type="checkbox"/>				
DynCorp <input type="checkbox"/>	Bill To: <u>KY</u>	Standard Service <input checked="" type="checkbox"/>	24 Rush <input type="checkbox"/>	2 Other <input type="checkbox"/>				
WSI <input type="checkbox"/>	P.O.#/Release: <u>DAF0009</u>	Lab: <u>[Signature]</u>						

White - Return to Originator Yellow - Lab Copy Green - Sample Custodian Blue - Originator

Rocky Flats Environmental Technology Site
Golden, CO 80402-0464
Safety and Hygiene Chain of Custody Record and Analysis Request

000050

Name of Originator		Title		Date:		Page of		
A. Gonzalez								
SAMPLE NUMBER Bldg/IMD/P#S#	ANALYZE FOR	VOLUME liters	SAMPLE TIME/	MEDIA	P A B	Personal Area Bulk	REMARKS	Lab Number
710-12132000-05-002	Asbestos				3		24023005	
710-12132000-05-003							Plt Count Trace	
710-12132000-05-004							at 3%	
710-12132000-05-005								
710-12132000-05-006								
701-12132000-05-001								
701-12132000-05-002								
701-12132000-05-003								
701-12132000-05-004								
701-12132000-05-005								
701-12132000-05-006								
701-12132000-05-007								
701-12132000-05-008								
701-12132000-05-009								
701-12132000-05-010								
701-12132000-05-011								
Relinquished by <i>[Signature]</i>	Received by <i>[Signature]</i>	Time/Date 1000A 12-27-00	Reinquired by	Received by	Time/Date			
Relinquished by	Received by	Time/Date	Reinquired by	Received by	Time/Date			
Relinquished by	Received by	Time/Date	Reinquired by	Received by	Time/Date			
Relinquished by	Received by	Time/Date	Reinquired by	Received by	Time/Date			
Report and Billing Instruction			Analysis Request			Seal# (Release #)		
Kaiser-Hill <input checked="" type="checkbox"/>	Verbal To: <i>A. Gonzalez</i>	Industrial Hygiene Sample			Condition of Seal			
RMRS <input type="checkbox"/>	Fax To: <i>6678</i>	<input type="checkbox"/> Standard Service	<input type="checkbox"/> Rush	<input type="checkbox"/> Other	<input type="checkbox"/> Broken <input type="checkbox"/> Unbroken			
SSOC <input type="checkbox"/>	Report To: <i>A. Gonzalez</i>	Asbestos Samples			Signature: _____			
DynCorp <input type="checkbox"/>	Bill To: <i>KH</i>	<input type="checkbox"/> 24 Rush	<input type="checkbox"/> 2 Rush	<input type="checkbox"/> Other	Comments: _____			
WSI <input type="checkbox"/>	P.O.#/Release: <i>DM00009</i>							
	Lab: <i>Reveritt</i>							

White - Return to Originator Yellow - Lab Copy Green - Sample Custodian Blue - Originator

62

**ASBESTOS
CERTIFICATION**

STATE OF COLORADO

Colorado Department of Public Health
and Environment
Air Pollution Control Division

This certifies that

Andre G. Gonzalez

Certification No. [REDACTED]

has met the requirements of 25-7-507, C.R.S. and Air Quality Control Commission Regulation No. 8, Part B, and is hereby certified by the state of Colorado in the following discipline:

INSPECTOR/MANAGEMENT PLANNER*

1876

Issued: 07/21/2000

Expires: 07/21/2001



Authorized APCD Representative

* This certificate is valid only with the possession of current AHERA certification in the discipline specified above.

Record Number: 1387

**Environmental
ETC
Training &
Consulting**

2761 West Oxford Avenue #7
Englewood, CO 80110
(303)781-0422

This course meets the
requirements of
AQCC Reg.#8

CERTIFIES THAT

ANDRE GONZALEZ

has successfully completed the
and passed the required examination in that discipline

EPA-APPROVED AHERA ANNUAL REFRESHER COURSE for INSPECTOR/MANAGEMENT PLANNER

This course is EPA-approved under Section 206 of the Toxic Substance Control Act (TSCA)

Course Date 06/06/2000
No of hours 8
Certificate No DR060600 - 07AM
Expires 06/06/2001



Lester K. Abbin
Authorized Signature

valid without raised seal

65/65