

ASBESTOS SURVEY

Lead/Sinter/Roaster/Blast Furnace Facilities

An asbestos survey was conducted at the ASARCO Lead/Sinter/Roaster/Blast Furnace Facilities following guidelines established by 40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA). The intent of the inspection is to locate and sample suspect asbestos containing material (ACM) and suspect asbestos containing building material (ACBM).

The following guidelines were used while conducting the inspection.

1. The bulk sampling was conducted by an accredited Inspector in accordance with section 206 of Title II of the Toxic Substance Control Act (TSCA), 15 U.S.C. 2601.
2. A walk through of the area was conducted before bulk sampling was performed in order to aid in the determination of possible ACM or ACBM locations.
3. The inspector visually inspected the areas to determine locations of the suspect ACM or ACBM. All sample locations were documented by the inspector.
4. When the suspected ACM or ACBM was discovered, the material was touched by the inspector to determine friability.
5. Homogeneous areas, defined by the type of material, were determined by the inspector.
6. For each homogeneous area, a representative sample or samples were taken by the inspector.
7. Samples were sent to an accredited laboratory and analyzed by PLM microscopy to determine the type and amount of asbestos content.

Peggy A. Munsell: AHERA Asbestos Inspector
Certificate #7ME112596Q1R006
Expiration Date: 11/25/97

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ASBESTOS SUMMARY

Sample Number	Lab Number	Location	Description	NESHAPS Classification	Quantity	ACM Type
RST-01	L952744-5	Wedge Roaster	Gaskets	Category I	Approx. 5 sf	Non-friable
LD-06	L960213-11	Blast Furnace Fan	Gaskets	Category I	Approx. 5 sf	Non-friable
LD-07	B96-0460	Blast Furnace Stacks	Mastic	Category I	9,000 sf	Non-friable
LD-08	B96-0461	Blast Furnace Stacks	Gaskets	Category I	Approx. 20 sf	Non-friable
LD-09	L960213-12	Blast Furnace Fan	Gaskets	Category I	Approx. 5 sf	Non-friable
LD-10	B96-0462	Lead Stack Flue	Mastic	Category I	3,956 sf	Non-friable
LD-20	B97-2408	Sub Station N-6	Pipe Wrap	Category II	Unknown	Non-friable
SNT-01	L960213-14	Sinter Coarse Rolls	Gasket	Category I	Approx. 40 sf	Non-friable
SNT-02	L960213-13	Sinter Machine Hood	Gaskets	Category I	Approx. 120 sf	Non-friable
SNT-03	B96-0463	Sinter Control Room	Wall Panels	Category II	96 sf	Non-friable
SNT-04/04a	B96-0464 B97-1168	Sinter Control Room	Floor Tile/Mastic	Category I	672 sf	Non-friable
SNT-08a	B97-1766	Sinter Hot Cottrell	Gaskets	Category I	25 sf	Non-friable
SNT-12,13,14	B97-2482-2484	Sinter Plant Flue	Gaskets	Category I	5 sf Multiply Flues	Non-friable
RVB-21	L950213-20	Old Wedge Roaster	Tar Seam Sealant	Category I	Approx. 400 sf	Non-friable
RVB-21a	B97-2406	Old Wedge Roaster	Rope Seam	RACM	40 sf	Friable

sf = square feet

NOTE: All unidentified gaskets found within the survey facility should be assumed to contain asbestos. Under ground pipes may contain asbestos.

40 CFR 61 NESHAP Classification of Asbestos:

- **Category I Nonfriable asbestos-containing material (ACM):**
means asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos as determined by polarized light microscopy (PLM).
- **Category II Nonfriable ACM:**
means any material excluding category I nonfriable ACM containing more than one percent asbestos as determined by PLM when the material cannot be crumbled, pulverized or reduced to powder by hand pressure when dry.
- **Friable asbestos material:**
means any material containing more than one percent asbestos as determined by PLM when dry can be crumbled, pulverized or reduced to powder by hand pressure. Further, if the asbestos content is less than 10% as determined by a method other than point counting by PLM then the tester must verify the asbestos content by point counting using PLM.

Laboratory: Dixon Information, Inc.
NVLAP Code #10847
A.I.H.A Accredited Laboratory 101012

Sun City Analytical
NVLAP Code #101870-0
Asbestos Consulting Agency 10-0011
Asbestos Laboratory 30-0011

SINTER PLANT, SINTER HOT COTTRELL, D&L BAGHOUSE LEAD STACK

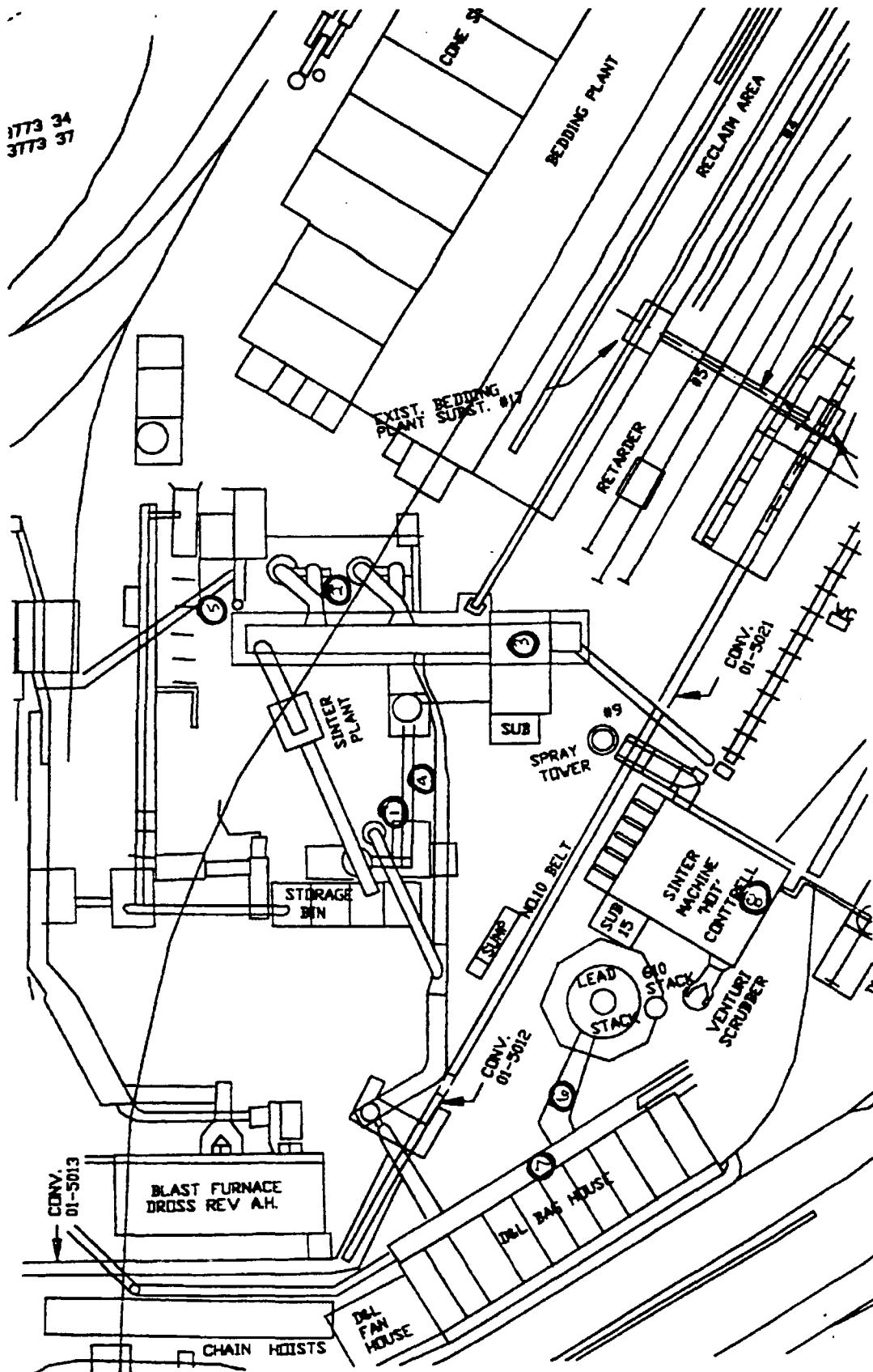
MAP LOCATION	PLANT LOCATION	PLANT/LAB NUMBER	DESCRIPTION	QUANTITY	ASBESTOS TYPE
1. Gasket	Sinter Plant	SNT-01/L960213-14	Gasket, Coarse Rolls	40 sf	70% Chrys
2. Gaskets	Sinter Plant	SNT-02/L960213-13	Gaskets, Sinter Machine Hood	Approx. 120 sf	80% Chrys
3. Sheeting	Sinter Plant	SNT-03/B96-0463	Sheeting, 4' x 8' Wall Panels, Control Room	96 sf	45-50% Chrys
Tile	Sinter Plant	SNT-04/B96-0464	Tile, Floor, Control Room	672 sf	30-35% Chrys
Mastic	Sinter Plant	SNT-04a/B97-1168	Mastic, Floor, Tile, Control Room	672 sf	10-15% Chrys
Mud	Sinter Plant	SNT-05/B96-0465	Insulating Mud, 2" Water Line, Floor above Control Room, Facing SW		None Detected
Tile	Sinter Plant	SNT-09/B97-2410	Tile, Ceiling, Control Room		None Detected
Tar	Sinter Plant	SNT-10/B97-2411	Tar, Control Room Roof		None Detected
Tar	Sinter Plant	SNT-11/B97-2412	Tar Paper Strips, Control Room Roof		None Detected
4. Gaskets	Sinter Plant	SNT-12,13 B97-2482,2483	Gaskets, Flues	5 sf	20-35% Chrys
5. Gaskets	Sinter Plant	B97-2484	Gaskets, Flues	Multiply Gaskets 5 sf	15-20% Chrys
6. Mud	Lead Stack Flue	SNT-06/L960213-16	Mud, Boiler, In Shed Located on Lead Stack Flue	Multiply Gaskets	None Detected
Mastic	Lead Stack Flue	LD-10/B96-0462	Mastic, Lead Stack Flue	3,956 sf	35-40% Chrys
Mastic	Lead Stack Flue	LD-10b/B97-0071	Mastic, Lead Stack Flue	same as above	25-30% Chrys
7. Tar	D&L Baghouse	SNT-07/L960213-15	Roofing Tar, Upper Level		None Detected
Brick/Motor	D&L Baghouse	SNT-08/L960213-17	Brick/Motor, Baghouse		None Detected
8. Gasket	Sinter Hot Cottrell	SNT-08a/B97-1766	Gasket, Screws, Floor Level	25 sf	10-15% Chrys
All Unidentified Gaskets Should Be Assumed To Contain Asbestos Unless Analysis Proves Otherwise.					

SINTER PLANT: Steel supports and structures. Concrete walls, floors, and supports. Metal bins and hoppers. Cinder brick. Steel pipes and flues, fiberglass insulation.

SINTER PLANT HOT COTTRELL: Steel supports and structures. Metal screws and hoppers. Fiberglass roofing and siding.

D&L BAGHOUSE: Brick structure. Steel supports, structures, and ladders. Some wood frames and planks.

LEAD STACK AND FLUE: Concrete structure. Steel ladder structures. Steel supports, structures, and ladders. Metal roofing and siding.



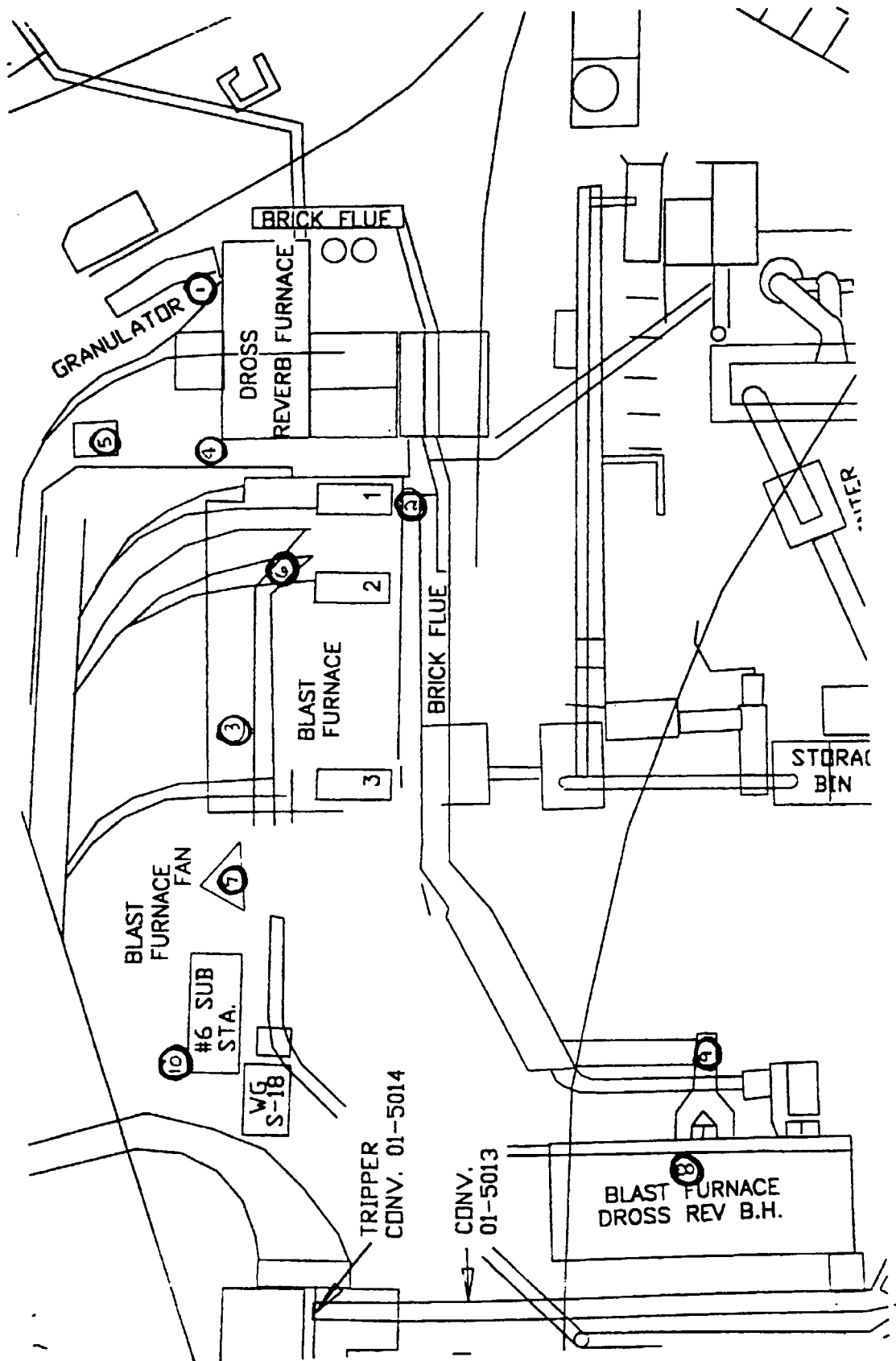
**DROSS REVERB FURNACE/BLAST FURNACE
BLAST FURNACE BAGHOUSE**

MAP LOCATION	PLANT LOCATION	PLANT/LAB NUMBER	DESCRIPTION	QUANTITY	ASBESTOS TYPE
1. Mud	Dross Reverb Furnace	LD-01/L960213-7	Mud Binder, North Lower Floor		None Detected
2. Insulation	Blast Furnace	LD-02/B96-0459	Pipe Insulation, Electrical Conduit above Exhaust for #1 Blast Furnace, Upper Level		None Detected
3. Brick/Motor	Blast Furnace	LD-03/L960213-8	Brick/Motor, Blast Furnace Flue		None Detected
4. Insulation	Dross Reverb	LD-04/L960213-9	Pipe Insulation, 2" Steam Pipe Located in Pipe Rack by Yard Office		None Detected
5. Tile	Dross Reverb	LD-19/B97-2409	Ceiling Tile, Yard Office		None Detected
6. Mastic	Blast Furnace	LD-05/L960213-10	Mastic, #2 Blast Furnace Hood		None Detected
7. Gasket	Blast Furnace	LD-06/L960213-11	Gasket, Blast Furnace Fan	Approx. 5 sf	80% Chrys
8. Mastic/Mud	Blast Furnace	LD-07/B96-0460	Mastic Blast Furnace Baghouse Towers	9,000 sf	10-15% Chrys
Mud	Blast Furnace	LD-12 thru 17 B96-4696-4701	Mud Insulation, Blast Furnace Baghouse Towers		None Detected
Gaskets	Blast Furnace	LD-08/B96-0461	Gasket, Blast Furnace Baghouse Towers	Approx. 20 sf	30-35% Chrys
9. Gasket	Blast Furnace	LD-09/L960213-12	Gasket, Blast Furnace Fan	Approx. 5 sf	50% Chrys
10. Insulation	Blast Furnace	LD-20/B97-2408	Insulation Pipe Wrap, Ground by N-6 Sub-Station	Buried Pipe Unknown	10-15% Chrys
All Unidentified Gaskets Should Be Assumed To Contain Asbestos Unless Analysis Proves Otherwise.					

DROSS REVERB: Concrete walls supports and structures. Steel supports and structures. Sheet metal roofing and siding. Metal hoppers and bins. Brick furnace and flues. Steel railroad ties and supporting structures. Pipe rack consisting of steel pipe, some calcium silicate insulation present.

BLAST FURNACE: Concrete wall supports and structures. Steel supports and structures. Sheet metal roofing, some siding. Metal hoppers and bins. Brick flues. Steel piping and flues.

BLAST FURNACE BAGHOUSE: Concrete walls, floors, and ceiling. Steel structures and supports. Attached tin enclosures.



WEDGE ROASTER/OLD WEDGE ROASTER R&R FLUE

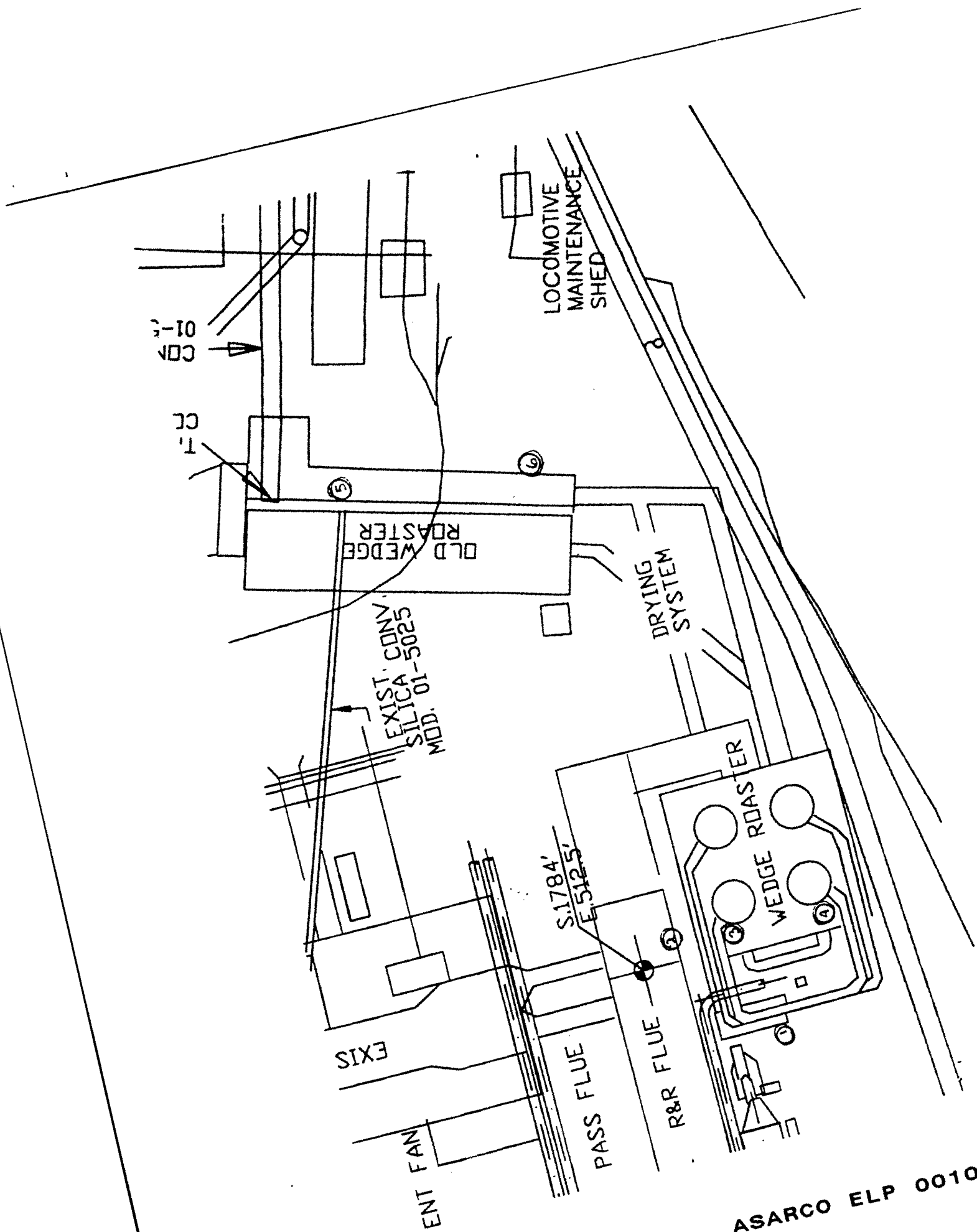
MAP LOCATION	PLANT LOCATION	PLANT/LAB NUMBER	DESCRIPTION	QUANTITY	ASBESTOS TYPE
1. Gaskets	Wedge Roaster	RST-01/L952744-5	Gasket, #2 Contop IIGF Baghouse Flues	Approx. 5 sf	50% Chrys
2. Rope	R&R Flue	RST-02/L952744-6	Rope, R&R Flue (Reverb and Roaster Flue)		None Detected
3. Mastic	Wedge Roaster	RST-03/B97-0551	Mastic, Roaster Exhaust Hood, 6th Floor		None Detected
4. Mastic	Wedge Roaster	RST-04/B972407	Mastic, Roaster Exhaust Hood, 6th Floor		None Detected
5. Tar	Old Wedge Roaster	RVB-2/L950213-20	Tar, Roof Seam Sealer	400 sf	18% Chrys
6. Rope	Old Wedge Roaster	RVB-21a/B97-2406	Rope, Seam Insulation Cement Walls	40 sf	50-55% Chrys
All Unidentified Gaskets Should Be Assumed To Contain Asbestos Unless Analysis Proves Otherwise.					

WEDGE ROASTER: Steel supports and structures. Sheet metal roofing and siding. Some fiberglass siding. Metal hoppers and bins. Conveyor belts and supporting structures. Metal flues with mineral wool insulation. Steel pipes.

REVERB AND ROASTER (R&R) FLUE: Steel supports and structures. Metal hoppers and screws. Brick flue. Metal siding with mineral wool insulation. Steel pipes. Some foam insulation.

OLD WEDGE ROASTER: Concrete walls, roof, and floors. Steel ladder structures. Steel pipes and flues.

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ASARCO ELP 0010949

ASBESTOS SURVEY HIGH LINE

An asbestos survey was conducted in December, 1995 following guidelines established by 40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA). The intent of the inspection is to locate and sample suspect asbestos containing material (ACM) and suspect asbestos containing building material (ACBM).

The following guidelines were used while conducting the inspection.

1. The bulk sampling was conducted by an accredited Inspector in accordance with section 206 of Title II of the Toxic Substance Control Act (TSCA), 15 U.S.C. 2601.
2. A walk through of the area was conducted before bulk sampling was performed in order to aid in the determination of possible ACM or ACBM locations.
3. The inspector visually inspected the areas to determine locations of the suspect ACM or ACBM. All sample locations were documented by the inspector.
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5. Homogeneous areas, defined by the type of material, were determined by the inspector.
6. For each homogeneous area, a representative sample or samples were taken by the inspector.
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Peggy A. Munsell: AHERA Asbestos Inspector
Certificate #7M11209502IR004
Expiration Date: 11/20/96
Report Date: 08/20/96

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SUMMARY: HIGH LINE

Trestle Support:

Wood/steel supports and structures.

No suspect asbestos containing material found

Level 1:

Steel high line supports, steel floor plates, angle iron hand rails, wood railroad ties, steel rails, and corrugated metal siding. Pipe rack(s) consisting of steel pipe, no insulation present. Steel tank (150 gallon), fiberglass insulation.

No suspect asbestos containing material found.

Level 2:

Steel supports, steel floor plates, and angle iron hand rails. Tin shed, wood structures, tar roofing material, and asphalt shakes. Remnants of four steel hoppers, steel shoots, and diverters.

Tar and roofing material, located on the tin shed, contain asbestos.

Level 3:

Steel supports, steel/wood floor plates, and angle iron hand rails. Three conveyor belt systems:

Belt #15: Existing transite siding, roofing material; 750 sq. feet.

Belt #15: Removed transite siding, roofing material; 3600 sq/ feet.

Belt #16: Corrugated steel siding.

Belt #17: Corrugated steel siding.

Transite siding and roofing material located at conveyor belt #15.

NOTE: Should unidentified gaskets be found within the survey facility, gaskets should be assumed to contain asbestos.

SUMMARY OF ASBESTOS MATERIAL FOUND HIGH LINE

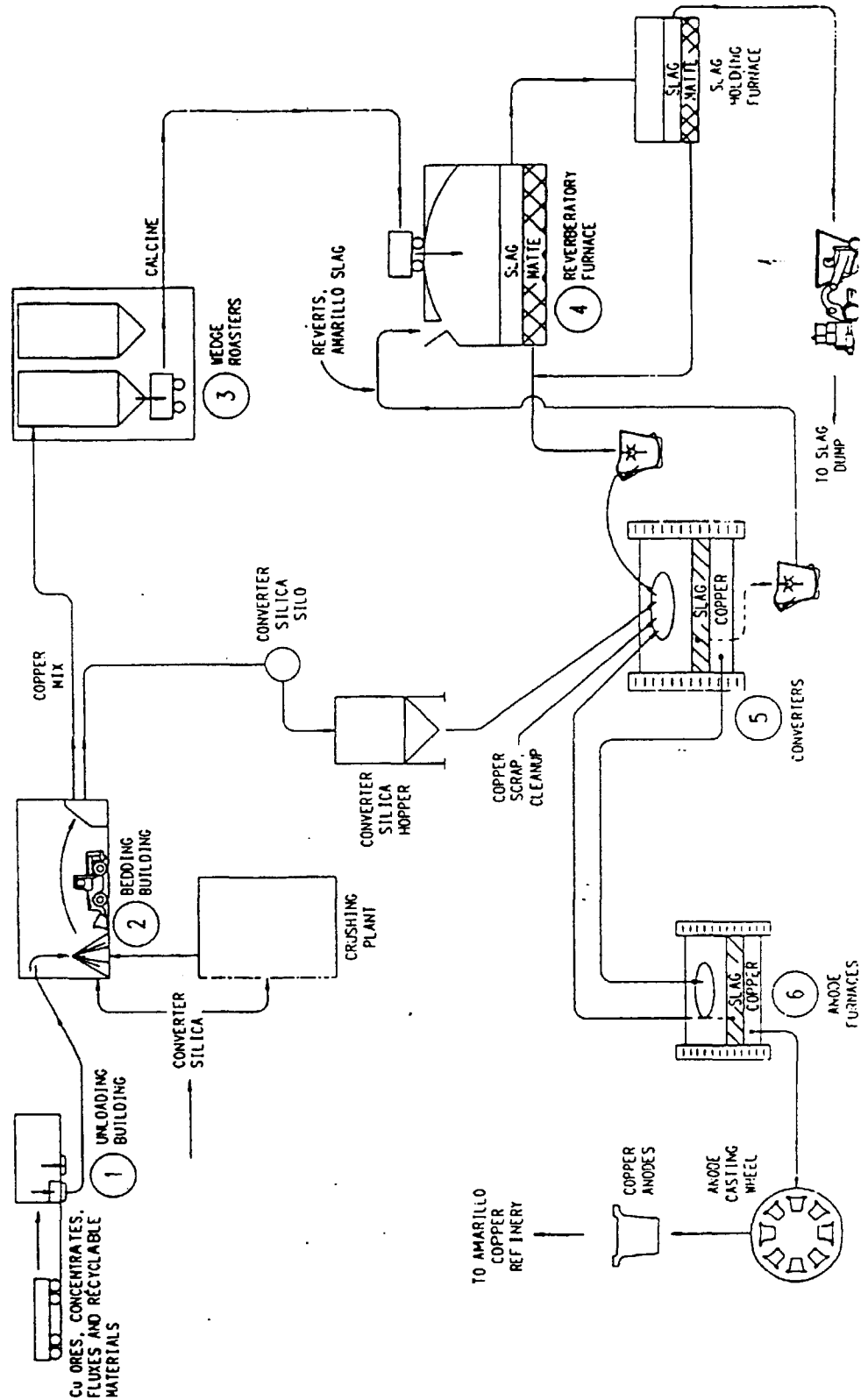
Sample Number	Lab Number	Location	Description	NESHAPS Classification	Quantity	ACM Type
HL-01	L952744-7	Level 3	Transite Siding	Category I	4,350 sq. feet (750 sq. feet remaining)	Non-friable
HL-02	B96-2973	Level 2	Tar (Heat Vent) Tin Shed	Category I	1 sq. foot	Non-friable
HL-03	B96-2974	Level 2	Roofing (Tin Shed)	Category I	48 sq. feet	Non-friable

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- **Category II Nonfriable ACM:**
means any material excluding category I nonfriable ACM containing more than one percent asbestos as determined by PLM when the material cannot be crumbled, pulverized or reduced to powder by hand pressure when dry.
- **Friable asbestos material:**
means any material containing more than one percent asbestos as determined by PLM when dry can be crumbled, pulverized or reduced to powder by hand pressure. Further, if the asbestos content is less than 10% as determined by a method other than point counting by PLM then the tester must verify the asbestos content by point counting using PLM.

Laboratory: Dixon Information, Inc.
NVLAP Code #10847
A.I.H.A Accredited Laboratory 101012
Sun City Analytical
NVLAP Code #101870-0
Asbestos Consulting Agency 10-0011
Asbestos Laboratory 30-0011

FIGURE VI.A-1
EL PASO PLANT - EXISTING COPPER CIRCUIT
FEED MATERIAL FLOW



ASBESTOS SURVEY CADMIUM PLANT

An asbestos survey was conducted in January, 1996 following guidelines established by 40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA). The intent of the inspection is to locate and sample suspect asbestos containing material (ACM) and suspect asbestos containing building material (ACBM).

The following guidelines were used while conducting the inspection.

1. The bulk sampling was conducted by an accredited Inspector in accordance with section 206 of Title II of the Toxic Substance Control Act (TSCA), 15 U.S.C. 2601.
2. A walk through of the building was conducted before bulk sampling was performed in order to aid in the determination of possible ACM or ACBM locations.
3. The inspector visually inspected the areas to determine locations of the suspect ACM or ACBM. All sample locations were documented by the inspector.
4. When the suspected ACM or ACBM was discovered, the material was touched by the inspector to determine friability.
5. Homogeneous areas, defined by the type of material, were determined by the inspector.
6. For each homogeneous area, a representative sample or samples were taken by the inspector.
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Peggy A. Munsell: AHERA Asbestos Inspector
Certificate #7ME11209502IR004
Expiration Date: 11/20/96

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SUMMARY: CADMIUM PLANT

Building number 1: Cadmium Crane Building

Concrete floor, sheet metal roof and siding, partial fiberglass siding and roofing, steel supports, structures, conveyors, and hoppers, wood frame interior structures.

No suspect asbestos containing material found.

Building number 2: Cadmium Roaster

Concrete floor, sheet metal roof and siding, steel supports and structures, brick roaster with steel structure components, flues, non-asbestos gasket.

No suspect asbestos containing material found.

Building number 3: Cadmium Baghouse

Concrete floor and supports, steel supports, structures, thimble floor, conveyors, and hoppers, partial sheet metal siding, flues.

Transite roof, doors, and siding.

NOTE: Should unidentified gaskets be found within the survey facility, gaskets should be assumed to contain asbestos.

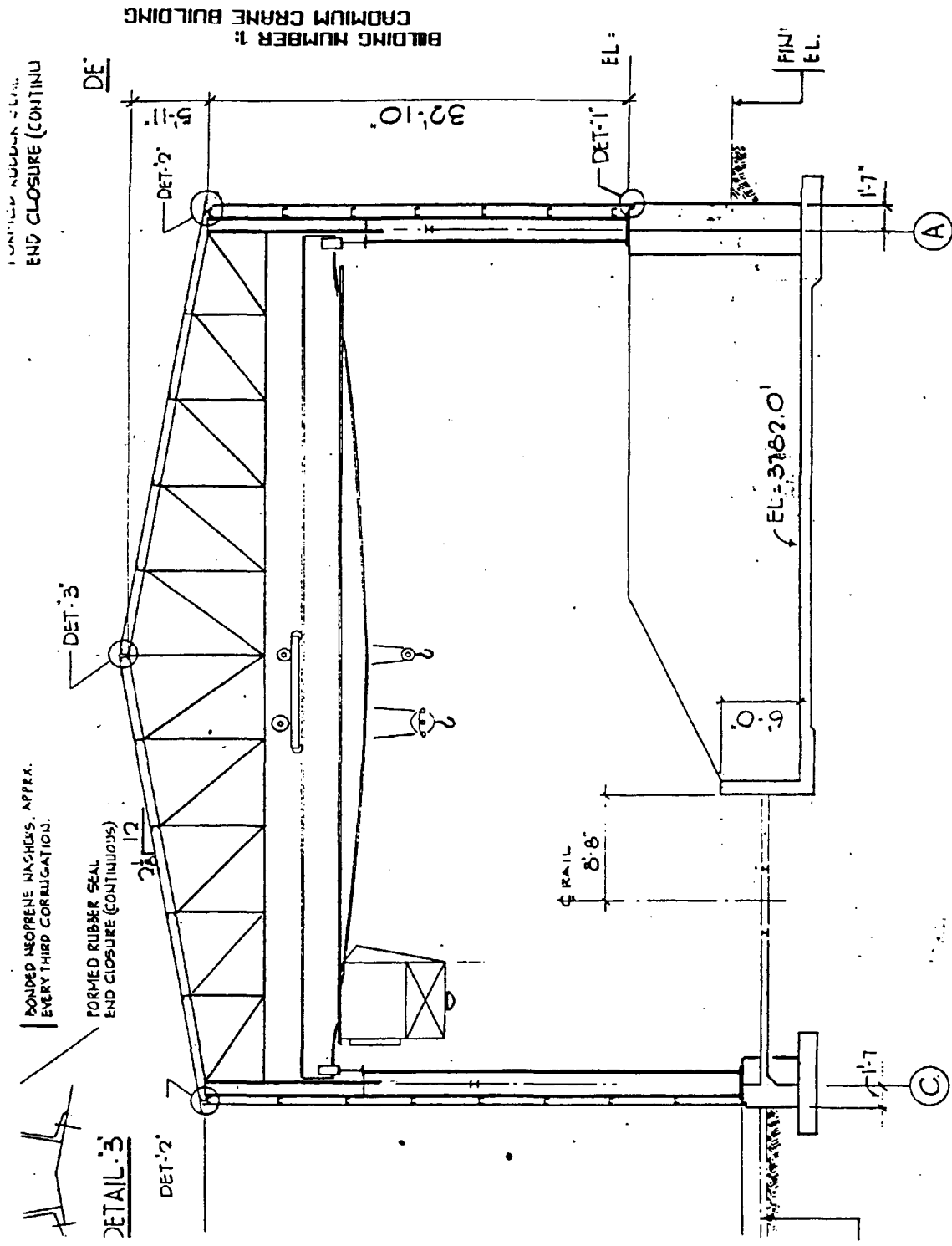
CADMIUM PLANT

Non-friable

- **Category I** Nonfriable asbestos-containing material (ACM):

- Friable asbestos material:

Laboratory: Dixon Information, Inc.



SECTION AT COL. LINE ⑥

SC. 1/8" = 1'-0"

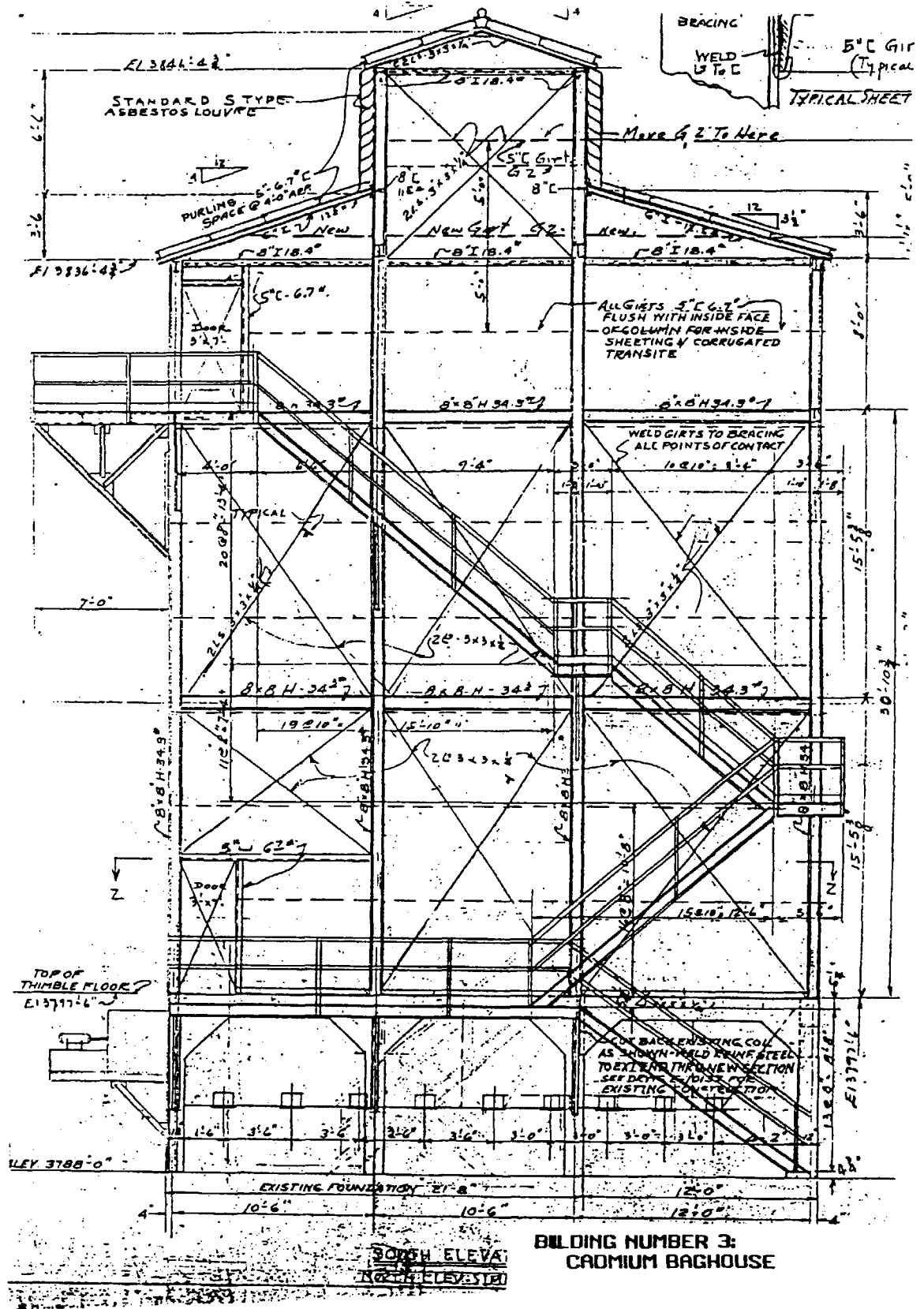


FIGURE VI.A-1
EL PASO PLANT - EXISTING COPPER CIRCUIT
FEED MATERIAL FLOW

