

DIXON INFORMATION INC.
MICROSCOPY, ASBESTOS ANALYSIS & CONSULTING
A.I.H.A. ACCREDITED LABORATORY #10847
NVLAP CODE 101012

February 9, 1996

ASARCO Technical Services
3422 South 700 West
Salt Lake City, UT 84119

Ref: Batch #33784, Lab #AS1-AS21
Received February 1, 1996
Project 3211
L960213-1 through L960213-21

Samples AS1 through AS21 have been analyzed by visual estimation based on EPA-600/M4-82-020 December 1982 optical microscopy test method including phase contrast, polarized light, dispersion staining, and stereo microscopy. Accuracy increases with increasing asbestos concentration.

If these samples are related to a demolition or are subject to NESHAPS 40CFR part 61 regulations, these regulations mandate that any sample containing less than 1% asbestos must be analyzed by point count. If asbestos is reported to be between 1% and 10%, see EPA "Clarification of asbestos NESHAP requirements to perform point counting" (copy available).

This report relates only to the items tested. This report must not be used to claim product endorsement by the NVLAP, the National Institute of Standards and Technology, or any agency of the U.S. Government. The results of analysis are as follows:

Lab AS1, Field L960213-5, CTT-01 Converter Cottrell Hooper
This sample contains two types of material: The first type is 10% chrysotile asbestos in black tar; the second type is 5% mineral wool and 20% organic fiber in off-white plaster. This sample is non-homogeneous. The overall asbestos concentration is 16%.

The first type is 90% of the sample. The second type is 10% of the sample.

Lab AS2, Field L960213-1, CD-03 Baghouse Siding
This is 25% chrysotile asbestos in grey cement.

Lab AS3, Field L960213-7, LD-01 Mud Insulation
This is 5% organic fiber in off-white plaster. Asbestos is none detected.

78 WEST 2400 SOUTH SOUTH SALT LAKE, UTAH 84115-3013
PHONE 801-486-0800 • FAX 801-486-0849 • RES. 801-583-1840

Batch #33784
Lab #AS1-AS21
Page 2

Lab AS4, Field L960213-8, LD-03 Brick/Mortar

This sample contains two types of material: The first type is tan brick; the second type is off-white sandy plaster. This sample is non-homogeneous. Asbestos is none detected.

The first type is 75% of the sample. The second type is 25% of the sample.

Lab AS5, Field L960213-9, LD-04 Pipe Insulation

This is 4% fiberglass and 6% synthetic fiber in white plaster. Asbestos is none detected.

Lab AS6, Field L960213-10, LD-05 Hood Insulation

This is 5% organic fiber in off-white plaster. Asbestos is none detected.

Lab AS7, Field L960213-11, LD-06 Gasket

This is 80% chrysotile asbestos in gray fabric with binder and debris.

Lab AS8, Field L960213-12, LD-09 Gasket

This is 50% chrysotile asbestos in gray plaster with debris.

Lab AS9, Field L960213-14, SNT-01 Expansion Gasket

This is 70% heated chrysotile asbestos in brown fabric with metallic wire and debris.

The fibers in this sample are very brittle and are characteristic of altered chrysotile asbestos. The index of refraction is altered. We suspect this sample has been exposed to high heat. Some of this asbestos may have been converted to forsterite.

Lab AS10, Field L960213-13, SNT-02 Gasket

This is 80% chrysotile asbestos in gray fabric with binder and debris.

Lab AS11, Field L960213-16, SNT-06 Boiler Mud

This is 35% mineral wool and 1% plant fiber in gray plaster. Asbestos is none detected.

Lab AS12, Field L960213-15, SNT-07 Roofing Tar

This is 2% organic fiber in black tar sealant. This sample is non-homogeneous. Asbestos is none detected.

Batch #33784
Lab #AS1-AS21
Page 3

Lab AS13, Field L960213-17, SNT-08 Back Mortar

This sample contains two types of material: The first type is tan brick; the second type is off-white sandy plaster. This sample is non-homogeneous. Asbestos is none detected.

The first type is 55% of the sample. The second type is 45% of the sample.

Lab AS14, Field L960213-6, RVB-18 3" Pipe insulation

This is 20% amosite asbestos and 1% chrysotile asbestos in white plaster.

Lab AS15, Field L960213-18, RVB-19 Back/Mortar

This is yellow fire brick. Asbestos is none detected.

Lab AS16, Field L960213-19, RVB-20 Floor insulation mud

This is 10% chrysotile asbestos in white plaster.

Lab AS17, Field L960213-20, RVB-21 Baghouse seam reinforcement

This sample contains two types of material: The first type is 30% chrysotile asbestos in gray and black binder; the second type is cross-woven fiberglass fabric. This sample is non-homogeneous. The overall asbestos concentration is 18%.

The first type is 60% of the sample. The second type is 40% of the sample.

Lab AS18, Field L960213-21, RVB-22 Mud insulation

This is brown sandy plaster. Asbestos is none detected.

Lab AS19, Field L960213-2, ZN-10 Baghouse roofing panel tar

This sample contains two types of material: The first type is 50% plant fiber in black tar paper; the second type is black tar with sand and limestone. This sample is non-homogeneous. Asbestos is none detected.

The first type is 60% of the sample. The second type is 40% of the sample.

Lab AS20, Field L960213-3, ZN-11 Wall-sub station

This is 20% chrysotile asbestos in gray cement.

Batch #33784
Lab #AS1-AS21
Page 4

Lab AS21, Field L960213-4, ZN-13 Baghouse roofing material
This sample contains three types of material: The first type is 50% plant fiber in black tar paper; the second type is black tar sealant with limestone; the third type is silver colored sealant. This sample is non-homogeneous. Asbestos is none detected.

The first type is 48% of the sample. The second type is 42% of the sample. The third type is 10% of the sample.

Very truly yours,