



S.I.S.D.2

MAR 18 1991

**CONTOP**

February 22, 1991

Mr. Steve Jones  
ASARCO, Incorporated  
2301 W. Paisano Dr.  
El Paso, Texas 79922

Re: Asbestos Abatement Procedures for the demolition of the Zinc  
Fuming Furnace - El Paso, Texas

Dear Steve:

ASARCO Incorporated (Owner) contracted Bierlein Demolition Contractors Inc. (Bierlein) to remove asbestos materials from the El Paso site. Bierlein identified and removed asbestos materials from the Zinc Fuming Furnace, Coal Handling Structure and the Rail Car Hopper. Bierlein encountered various asbestos products during the project. Asbestos block insulation, piping, transite, gaskets, roping and debris were removed in accordance with Federal, State, Local regulations and the ASARCO Contract documents provided.

#### EMPLOYEE HEALTH AND TRAINING

Before beginning work on site, Bierlein provided all abatement workers with a thorough medical screening. This consisted of a medical history, basic medical examination, chest x-ray, pulmonary function test, and blood lead level test. Throughout the project, The Center for Occupational Medicine provided additional examinations as the need arose and to track blood lead levels of the workers.

Training was provided to all abatement workers about the hazards of asbestos, applicable rules, work practices, respiratory protection and decontamination procedures. A third-party, EPA approved agency provided this training. All personnel training was updated on an annual basis.

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ASARCO ELP 0010107



Additionally, all employees were given safety training and orientation particular to the project and their job responsibilities. This training, in part, consisted of site hazards, fall protection, emergency procedures, respiratory protection, lead dust decontamination procedures, and hot work practices. Bierlein held daily safety meetings to reinforce employee awareness.

#### PERSONAL PROTECTIVE PROCEDURES

Abatement personnel were required to wear the following protective equipment for all activities:

- Steel Toe Work Boots
- Hardhat
- Safety Glasses w/sideshields
- Work Gloves
- Disposable Tyvek Suit
- Approved Respirator
- Hearing Protection as needed
- Canvas Coveralls (provided by Asarco)
- Safety Harness

Upon project start-up, Asarco provided all workers with their own respirator fitted with HEPA/Chemical combination cartridges. Bierlein fit-tested the employees to insure proper respirator fit using the irritant smoke test protocol. Asarco cleaned and provided new cartridges for these respirators on a daily basis.

Bierlein determined the level of respiratory protection by work tasks and employee personnel monitoring. Asarco, Inc. provided MSA Half-Face negative pressure respirators as our basic level of protection. Workers used these respirators during all phases of the project except during removal of friable asbestos materials. Half-face respirators provided a protection level of ten times the permissible exposure level (0.2 fibers per cubic centimeters). MSA Full-Face respirators with HEPA/Chemical cartridges were used during removal of friable asbestos materials. Full-Face respirators provided a protection factor of fifty times the permissible exposure level (1.0 fibers per cubic centimeters).



Bierlein provided all abatement workers with disposable DuPont Tyvek coveralls before entering the work area. These coveralls were worn over disposable briefs and discarded upon leaving containment. Workers then proceeded to Asarco's shower room for a complete shower decontamination. All abatement workers took showers before lunch and before leaving the plant at the end of the day.

#### WORK PROCEDURES

Before workers removed any asbestos, Bierlein established a regulated area by erecting barrier tape. This regulated area was maintained throughout the project. Bierlein posted OSHA approved signage to alert Asarco and contractor employees to the hazards of this area.

The Rail Car Hopper area was abated first. This hopper was constructed of transite sheeting. Workers with cutting torches cut the heads off the bolts securing the transite to the structure. The transite was carefully removed and lowered to the ground, then wrapped in two layers of six-mil polyurethane sheeting. The wrapped transite was placed in an open 40 yard roll-off container for disposal at the Clint Landfill.

Before building containment for the Zinc Furnace, Bierlein power washed the entire structure to remove any hazardous substances. Workers removed miscellaneous steel and loose debris from the decks. The fifth, fourth and third floor were contained as a single enclosure. Bierlein constructed this containment with 1/2 inch plywood, 2x4 lumber and six-mil polyurethane sheeting. This containment prevented the release of airborne fibers. Six HEPA-filtered negative air machines were installed within this enclosure.

Abatement began on the fifth floor and progressed down to the third. Bulk removal consisted of wetting and carefully removing the asbestos material and placing it in two six-mil poly bags for disposal. After the gross contamination was removed, Bierlein began a final cleaning procedure. A thorough inspection of all surfaces was made



before progressing down to the next level. Containment was constructed on the second, first, ground and the basement, in the same manner, as the upper floors. Nine HEPA-filtered negative air machines were installed in this enclosure due to the increased cubic foot area. After final cleaning of this area, a detail cleaning and wet wipe down was performed throughout all six floors. A final visual inspection insured that all surfaces were asbestos free before encapsulating. McClelland Management Services, Inc. performed clearance air monitoring before releasing the area. All asbestos debris, poly, wood, and disposable clothing were placed in six-mil poly bags or wrapped in two layers of six-mil poly. This material was then stored in 40-yard closed dumpsters for disposal at the Clint Landfill.

The Coal Handling Building and exterior of the Zinc Fuming Furnace were constructed of transite. Bierlein's abatement workers removed this material using an 80 foot manlift and our Manitowoc crane. The bolts securing the transite were cut and the material was wrapped in two layers of six-mil poly. The asbestos debris was placed in open 40-yard containers for disposal at the Clint Landfill.

Asbestos pipe insulation was abated by workers trained in Glovebag removal. This method was used for short runs of piping outside of the containment area. Another method of removing piping was to wrap the pipe with two layers of poly and cut the pipe at an asbestos free joint. All abated piping was placed in closed 40-yard containers for disposal at the landfill.

#### AIR MONITORING

Throughout the project Bierlein performed personal air monitoring to determine employee exposure comply with OSHA 1926.58. Using BGI low volume pumps and 25mm sampling cassettes, twenty-five percent of the abatement workers were monitored on a daily basis. Our sampling pumps were calibrated before and after each use. The reading of these samples were performed by McClelland Management Services, Inc. (MMS, Inc.) of El Paso, Texas. McClelland is an industrial hygiene firm using the NIOSH method #7400 utilizing Phase Contrast Microscopy for sample



analysis. In addition to personal air sampling, MMS, Inc. performed background, area and clearance sampling for Bierlein.

Before demolishing the Zinc Fuming Furnace, McClelland performed clearance air sampling for that area. Seven samples were analyzed with results lower than .002 fibers per cubic centimeters. Industry standards now recognize .005 fibers per cubic centimeter or lower as acceptable for re-occupancy or demolition. EPA's standards are less stringent (0.01 fibers per cubic centimeters) than Bierlein's practice of .005f/cc., before structural demolition.

#### ASBESTOS DISPOSAL

All asbestos containing debris was either placed in two six-mil polyurethane bags or wrapped with two layers of six-mil poly for disposal. Non-friable asbestos (transite) debris was loaded into poly lined 30 yard open top containers. Friable asbestos materials were placed into poly lined 40 yard containers. Bierlein contracted with El Paso Disposal to provide these containers and transport to the Clint Landfill, Clint, Texas. Several loads were transported to this landfill before it closed due to changes implemented by EPA NESHAP rules (40 Cfr 61.156) on November 20, 1990 affecting active asbestos disposal sites. These rule changes address generator, transporter, and landfill documentation for asbestos disposal. Bierlein was forced by this closing to seek an alternate transporter and landfill. Meribach Corporation of El Paso entered into a contract with Bierlein to transport the asbestos material to the Mountainair Facility outside of Albuquerque, New Mexico. Bierlein abatement workers transferred the remaining asbestos debris from El Paso Disposal's boxes to Meribach's. The additional labor and expenses associated with these changes were addressed in a letter to you dated January 9, 1991. Solid waste manifests were generated for every load transported for disposal. These manifests were signed by the generator (ASARCO, Inc.), the removal contractor (Bierlein), the transporter (El Paso Disposal or Meribach), and the landfill (Clint or Mountainair). A copy of these manifests was given to ASARCO for their records.



The removal of asbestos containing materials associated with the demolition of the Zinc Fuming Furnace was completed safely with no incidents. The close cooperation between ASARCO, Inc. and Bierlein insured a successful completion to the project. I look forward to working with ASARCO, Inc. in the future.

If I can be of any further help or if you have any questions, please contact me at our Houston office.

Sincerely,  
BIERLEIN DEMOLITION CONTRACTORS, INC.

A handwritten signature in dark ink, appearing to read "Bertram H. Snead", written over a horizontal line.

Bertram H. Snead  
Asbestos Services Manager

pc: Dennis Terrian  
Ray Passeno  
Charles B. Brennen