



FROM:	Ronald E. Benton - Industrial Hygiene, GOB
TO:	W. S. THOMAS - BATON ROUGE CALCINED COKE PLANT
COPY:	Paul L. Patty, D. E. Thrasher, D. R. Mason, J. R. Abbott - Baton Rouge; H. V. Helton, E. J. Gates, T. N. Brown, W. A. Wright, P. R. Laden, D. B. Mortimer, B. J. Sasser, Dr. E. C. Irby - EXO
DATE & SUBJECT:	July 27, 1983 ASBESTOS PROGRAM

In the early 1970's, Reynolds Metals Company instituted a program to remove all non-essential asbestos-containing products from our manufacturing facilities. Although this program has been quite successful, several areas still remain where asbestos is currently being used. Consequently, the Medical Department, along with Central Engineering, has begun a final effort to eliminate all inhalation exposure to asbestos. In order to accomplish this goal, all asbestos-containing products which have feasible substitutes will be eliminated from RMC facilities. Where there are no feasible substitutes, appropriate work practices will be developed, so that there will be no inhalation exposure to asbestos while using the product.

As part of this effort, the Baton Rouge Plant was visited on April 12-14, 1983, to evaluate the status of the plant's asbestos control program. During this audit, those asbestos-containing products in inventory were identified, as well as those items already in place or currently being used by the plant.

Results of this visit indicate that the Baton Rouge Plant has performed a tremendous job in eliminating the usage of many asbestos-containing products. Several small areas, however, need additional attention.

First, those asbestos-containing items currently being used by the plant were identified. From these items, a list was compiled of those products which may represent a potential exposure to the worker. As a result, the plant should remove these items from use and substitute a non-asbestos product. Table 1 lists each of these products, as well as potential substitutes. Where possible, the plant should return its current inventory for credit. If this is not feasible, then the plant should place the material in labeled, sealed plastic bags and dispose of it in an approved sanitary landfill. Contact the Environmental Control Department for information on proper disposal procedures and approved landfills.

Second, nine (9) bulk samples of material already in place or currently being used were collected and screened for asbestos content (Appendix II). Based on these results, Table 2 was developed, identifying the various applications of those products found to contain asbestos. It should be noted that, for those products already in place, the presence of undisturbed asbestos (e.g. burner cap gasket, transite pipe, outer covering on #1 kiln electrical cable) does not represent an exposure hazard. Consequently, there is no requirement to remove these items from the plant. If, however, work is performed on any of these products (e.g. demolition, repair, removal), then non-asbestos substitutes should be utilized, where available, and appropriate work practices followed (Appendix III) to eliminate any inhalation exposure to asbestos. If work is performed on an item

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not listed in Tables 1 or 2, it should be handled as asbestos, until appropriate analytical results can be obtained.

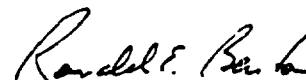
Third, there were several places noted in the kiln area where scrap pieces of the old asbestos rope had been discarded. Some were hanging from metal beams, while others were on catwalks and other walkways where they could be damaged. Consequently, all scrap rope should be removed from the plant and sealed in labeled plastic bags for appropriate disposal. Employees involved in this task should wear approved respiratory protection (e.g. 3M #8710; American Optical #1050) and place the respirators in the plastic bags for disposal when the job has been completed. The transite pipe left over from the same engineering project does not represent an exposure hazard, however, and does not need to be removed. Please contact COS Central Engineering or the Industrial Hygiene Department, if any future application is anticipated.

In order to accomplish the objectives of this program and to ensure its continued effectiveness, it is recommended that someone at the Baton Rouge Plant be designated as contact person. In this regard, that individual would receive and disseminate information concerning non-asbestos substitutes. In addition, he would review all Material Safety Data Sheets (MSDS) for new products, to ensure that no asbestos is contained in them. (Note: A procedure is currently being developed through Purchasing which will allow RMC to determine whether or not asbestos is in a product before it enters the plant). Finally, this individual will be responsible for making certain that the appropriate safe-handling procedures are utilized when working with asbestos-containing products.

If you have any question concerning this report or if further information is desired, please feel free to contact us.

REB/mjm

Att.



Ronald E. Benton



Robert G. Burton

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Table 1
BATON ROUGE CALCINED COKE PLANT
ASBESTOS PRODUCTS AND SUBSTITUTES

<u>ASBESTOS PRODUCT</u>	<u>SUBSTITUTES</u>
Sleeves on laboratory clamps	Fiberglass, ceramic and silicone fiber sleeves are available. These sleeves are fabricated from cloth that is also available.
Cloth in laboratory	See above.
Electrical wire	All manufacturers make non-asbestos high temperature jacketed wire, such as SMRL.
Gaskets	Gaskets are available for all applications, depending upon use, temperature, and the abrasion encountered.
Wire screen in laboratory	Thin sheets of ceramic fiber paper or cements will work for heat distribution.

Abstract—The purpose of this study was to determine the effect of a 10-week training program on the heart rate (HR) and energy expenditure (EE) of sedentary, middle-aged women. The subjects were 12 sedentary women, 30 to 45 years of age, who were randomly selected from a telephone directory. The subjects were divided into two groups: a control group and a training group. The control group consisted of six women who did not participate in any physical activity during the study. The training group consisted of six women who participated in a 10-week training program. The training program consisted of three sessions per week, each lasting 30 minutes. The sessions were performed on a stationary bike at a heart rate of 150 beats per minute. The HR and EE were measured at the beginning and end of the study. The HR and EE of the training group increased significantly after 10 weeks of training, while the HR and EE of the control group remained unchanged. The results of this study suggest that a 10-week training program can improve the HR and EE of sedentary, middle-aged women.

SURVEYED BY R. E. Benton; R. G. Burton

LOCATION	"	"
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DATE April 12-14, 1983

DIVISION Primary Metals

ASBESTOS SURVEY

[illegible]

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Table 2

BATON ROUGE CALCINED COKE PLANT
ASBESTOS-CONTAINING MATERIALS

<u>TYPE OF PRODUCT</u>	<u>APPLICATION</u>	<u>AREA/DEPARTMENT</u>	<u>SPECIAL HANDLING</u>	<u>SUBSTITUTES</u>
ELECTRICAL PRODUCTS & COMPONENTS				
Wire insulation	Electrical wire	Laboratory, kiln floor	B	Kevlar, fiberglass
GASKETS				
Compressed sheets	Metal joint seals	All	A	Garlock Blu-guard
Woven cloth	Metal joint seals	Kiln floor - burner cap	B	Garlock Blu-guard
PACKING				
Rope	Door seals	Combustion chamber	B	Kevlar, fiberglass, ceramic fiber
FIRE & HEAT SHIELDING				
Transite pipe	None	Kiln area - storage yard	A	
Cloth	Laboratory use	Laboratory	B	Kevlar, fiberglass, ceramic fiber
Sleeves	Heat insulation for lab clamps	Laboratory	B	Fiberglass, ceramic fiber
Wire support screen	Support for hot laboratory equipment	Laboratory	A	Ceramic, nickel chromium
AUTOMOTIVE & FRICTION PRODUCTS				
Brake shoes*	Forklifts	Maintenance	D	Kevlar presently being evaluated.

*Brake shoes are not routinely replaced by plant personnel; when they are, Special Handling Procedure D should be followed.

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APPENDIX III

SPECIAL HANDLING PROCEDURES

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SPECIAL HANDLING PROCEDURE

"A"

This procedure is for those products which should pose no asbestos exposure while removing or handling the material. Examples of the types of materials included are: Asbestos covered wire, clutch facings, compressed gaskets, and asphalt roof coating.

SPECIAL EQUIPMENT REQUIRED:

Labeled 6 mil plastic trash bags with ties (available from local safety supply distributor).

MEDICAL EXAMINATIONS:

None required.

PERSONAL PROTECTIVE EQUIPMENT:

None required.

WORK PRACTICES:

1. No asbestos scrap shall be left on the floors, walkways, or equipment.
2. All asbestos scrap shall be placed and sealed in labeled plastic bags and disposed of at an approved sanitary landfill.
3. No blowing or dry-sweeping, scraping, or sanding of asbestos materials or surfaces covered with asbestos-containing material shall be permitted.

MONITORING:

None required.

SPECIAL HANDLING PROCEDURE

"B"

This procedure is for those products which, when handled or removed from existing surfaces, should not result in asbestos exposures above the OSHA permissible exposure level. (Exposures may, however, be above the 0.1 fiber/cc medical maintenance level.) Examples of the types of materials included are: Rope, cloth, gloves, blankets, and coats.

SPECIAL EQUIPMENT:

Labeled 6 mil plastic trash bags with ties (available from local safety supply distributor).

MEDICAL EXAMINATIONS:

Annually, personnel involved in the removal or handling of materials in this group shall be provided a physical examination, if exposures exceed 0.1 fibers/cc. This examination shall include a chest x-ray, pulmonary function test (FVC and FEV), and a complete history.

PERSONAL PROTECTIVE EQUIPMENT:

Half-mask air-purifying respirator (Examples: 3M #8710 or #9900 Series, American Optical #1050, or any other NIOSH respirator approved for asbestos). NOTE: Employees issued respirators must be instructed as to the proper use, care, and fit of the respirator.

WORK PRACTICES:

1. No asbestos scrap shall be left on the floors, walkways, or equipment.
2. No blowing or dry-sweeping, scraping, or sanding of asbestos material or surfaces covered with asbestos-containing material shall be permitted.*
3. All disposable respirators and scrap asbestos material shall be placed and sealed in labeled plastic bags and disposed of at an approved sanitary landfill.

MONITORING:

Periodic monitoring will be carried out by, or under the direction of, the Corporate Industrial Hygiene Department. Based on the results of the monitoring study, any necessary recommendations will be made.

*All asbestos-containing material shall be kept thoroughly wetted, while handling and/or removing the material.

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SPECIAL HANDLING PROCEDURE

"C"

This procedure is for those products which, when handled or removed from existing surfaces, may result in exposures above the OSHA standard. Examples of the types of materials covered are: Furnace and oven wall, door, and ceiling insulation and steampipe and boiler insulation.

SPECIAL EQUIPMENT:

1. Labeled 6 mil plastic bags with ties (available from local safety supply distributor).
2. If available, vacuum cleaner equipped with special filter, to prevent re-entrainment of asbestos fibers into the workplace.
3. Warning signs indicating ASBESTOS HAZARD.

MEDICAL MONITORING:

Annually, personnel involved in the removal or handling of materials in this group shall be provided a physical examination, if exposures exceed 0.1 fibers/cc. This examination shall include a chest x-ray, pulmonary function test (FVC and FEV), and a complete history.

PERSONAL PROTECTIVE EQUIPMENT:

1. Half-mask air-purifying respirator, equipped with a high efficiency filter (Examples: WILLSON #1210, NORTON #7506, MSA Confo II (#459440), or any other NIOSH-approved non-disposable respirator. NOTE: Employees issued respirators must be instructed as to the proper use, care, and fit of the respirator.
2. Disposable coveralls, head and foot coverings, and gloves shall be provided to each employee involved in the demolition, removal, and/or handling of asbestos insulation.

WORK PRACTICES:

1. Prior to beginning removal or demolition of any asbestos material, caution signs shall be placed around the work area, at a distance safety away from any dust which may be created. For large projects (i.e. furnaces, ovens, boilers, etc.), the immediate work area shall be enclosed in a plastic room.

"C" Page 2
Work Practices Continued

2. A decontamination area shall be established, to allow the workers a place to don and remove the personal protective equipment.
3. Disposable coveralls, gloves, and head and foot coverings shall be disposed of in the labeled 6 mil plastic bags.
4. All asbestos insulation material shall be kept thoroughly wetted, while handling and/or removing the material.
5. No blowing or dry-sweeping, scraping, or sanding of asbestos material or surfaces covered with asbestos-containing material shall be permitted. Where practical, the residual scrap material on work surfaces should be vacuumed with a special vacuum cleaner equipped with an HEPA filter, to prevent re-entrainment of the asbestos fibers into the workplace. Otherwise, work surfaces should be double-wet cleaned.
6. All scrap asbestos material, as well as the disposable personal protective equipment, shall be placed and sealed in a labeled plastic bag and disposed of at an approved sanitary landfill. (The plant or corporate Environmental Control Department should be contacted for any specifics.)

MONITORING:

1. Measurements of airborne asbestos fibers, during the handling and/or removal of asbestos material, shall be conducted by, or under the direction of, the Corporate Industrial Hygiene Department.
2. Based on the results of the monitoring study, the Corporate Industrial Hygiene Department will make any necessary recommendations concerning additional monitoring, employee notification and training, and any changes in personal protective equipment.

SPECIAL HANDLING PROCEDURE

"D"

This procedure covers the recommended work practices to be used when changing/installing brake shoes.

SPECIAL EQUIPMENT:

1. Labeled 6 mil plastic bags with ties (available at local safety supply distributor).
2. Heavy-duty paper towels or rags, for wiping brake drums.

MEDICAL EXAMINATIONS:

Annually, personnel involved in the removal or handling of materials in this group shall be provided a physical examination, if exposures exceed 0.1 fibers/cc. This examination shall include a chest x-ray, pulmonary function test (FVC and FEV), and a complete history.

PERSONAL PROTECTIVE EQUIPMENT:

Half-mask air-purifying respirator (Examples: 3M #8710, 9900 Series, American Optical #1050, or any other NIOSH-approved respirator for asbestos).

NOTE: Employees issued respirators must be instructed as to the proper use, care, and fit of the respirator.

WORK PRACTICES:

1. All brake drums shall be wiped clean, using a wet paper towel or rag. No blowing or dry-sweeping shall be permitted.
2. All disposable respirators, towels, and/or rags used to clean the brake drums shall be placed and sealed in labeled plastic bags and disposed of at an approved sanitary landfill. (The plant or corporate Environmental Control Department should be contacted for any specifics.)

MONITORING:

1. Measurements of airborne asbestos fibers during the removal, cleaning, and reinstallation of brake shoes shall be conducted by, or under the direction of, the Corporate Industrial Hygiene Department.
2. Based on the results of the monitoring study, the Corporate Industrial Hygiene Department will make any necessary recommendations concerning additional monitoring, employee notification and training, and any changes in personal protective equipment.

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File

MEMORANDUM

TO: W. Sibley Thomas

FROM: R. E. Benton - GOB
R. G. Burton - EXO

DATE: July 25, 1983

SUBJECT: ASBESTOS SURVEY AND REPLACEMENT PROGRAM

We would like to thank you for your cooperation during the visit to your plant on April 12-14, 1983. It is now Company policy that where feasible substitutes are available for asbestos; that they will be purchased; and that where we must purchase asbestos no machining, cutting or grinding will be done to the material. In this package there is enclosed the following:

1. A list of materials that will substitute for asbestos that we found in use in your plant.
2. A list showing common places in which you can expect to find asbestos containing materials in your plant and an attachment that gives you the precautions that must be taken when these materials are worked with, or when they are removed and disposed. These safe handling procedures have been developed to eliminate any inhalation exposure to asbestos when working on a product containing asbestos.
3. A list of asbestos replacement products with telephone numbers and names or companies that can assist in replacing asbestos containing products or offer alternatives to present replacements.

This survey and replacement program is intended to increase everyone's awareness and should be covered with plant personnel, especially maintenance, engineering, and purchasing.

We would also like to stress that this asbestos program is an ongoing program and that we will be available to assist in the applications and problems associated with asbestos on a continuing basis. We can assist in obtaining trial samples and coordinating information as you require them.

Thank you for your cooperation.

Ronald E. Benton

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