PLAINTIFF'S EXHIBIT

NAR-166

IN THE CIRCUIT COURT OF KANAWHA COUNTY, WEST VIRGINIA

IN RE: ASBESTOS III CIVIL ACTION NO. 92-C-8888

NORTH AMERICAN REFRACTORIES COMPANY'S ANSWERS TO PLAINTIFFS REQUEST FOR PRODUCTION TO ALL PRODUCTS OR SUPPLIERS DEFENDANTS

GENERAL OBJECTION

This Defendant objects to these Requests for Production of Documents insofar as they seek information which is subject to attorney-client privilege, constitutes attorney work product or work product prepared in anticipation of litigation or which is otherwise not discoverable under the provisions of the West Virginia Rules of Civil Procedure.

This Defendant further objects to these Requests for Production of Documents insofar as they call for responses that are not relevant to the time period during which or the locations at which Plaintiffs worked. These Requests for Production of Documents are further objected to as being irrelevant, overly broad and burdensome and not reasonably calculated to lead to the discovery of admissible evidence.

1. Defendants object to this request as being overly broad, irrelevant and not designed to lead to the discovery of relevant and admissible evidence in that it is not limited in scope, time, geography or job site to the subject matter of the underlying suits. Defendant further objects to this request as unduly vague and unduly burdensome. Without waiving these objections, copies of sample sales catalogs and sales catalogs and sales brochures are produced as Exhibit "A" for asbestos-containing products identified at worksites for named plaintiffs in pending lawsuits in this trial scenario.

2. There are no such product samples.

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/1

3. See objections to Request for Production Number 1 and General Objections. Without waiving these objections, see Exhibit "B" regarding documents received from The Refractories Institute concerning the potential health effects of asbestos. Counsel for this Defendant has received records pertaining to Eagle Picher product warnings in other litigation which are attached as Exhibit "C". This defendant had no reason to believe that any such potential health effects existed with regard to its products because of their very small asbestos content.

4. There are no such documents.

5. Defendant objects to this Request for Production on the grounds that it is overly broad and burdensome, is not designed to lead to the discovery of relevant and admissible evidence and is not limited in scope, time, geography or job site to the subject matter of the underlying suits. Additionally, Defendant objects to this Request to the extent that it invades the attorney-client privilege or constitutes attorney work product as it seeks information which may have been developed in anticipation of litigation or subsequent to the institution of litigation.

6. See Objection to Request for Production Number 1 and General Objections. Without waiving these objections, see Exhibit "B" regarding materials received from The Refractories Institute regarding OSHA regulations.

7. Not applicable. No such tests were done by or for this Defendant since this Defendant had no reason to believe there were any adverse health effects associated with the use of its small line of asbestos-containing products which contained very small amounts of asbestos in encapsulated or wet form.

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/2

8. Not applicable. No such tests were done by this Defendant or at its request since this Defendant had no reason to believe that there were any adverse health effects associated with the use of its small line of asbestos-containing products which contained very small amounts of asbestos in encapsulated or wet form.

9. None to the best of this Defendant's knowledge.

10. Defendant objects to Request for Production Number 10 in that it seeks information which is irrelevant, immaterial and not reasonably calculated to lead to the discovery of admissible evidence. Defendant further objects to this request for Production as overly broad, unduly burdensome and harassing. Defendant North American Refractories Company objects to the disclosure of any of its confidential and privileged financial information, constituting trade secrets, without the entry of an appropriate protective order and only after a submissible case for the entry of punitive damages against this Defendant has been made.

11. The insurance arrangement for North American Refractories Company is the subject of a confidential agreement among carriers. This Defendant objects to questions concerning this agreement. See Objection to Request for Production Number 1 and General Objections.

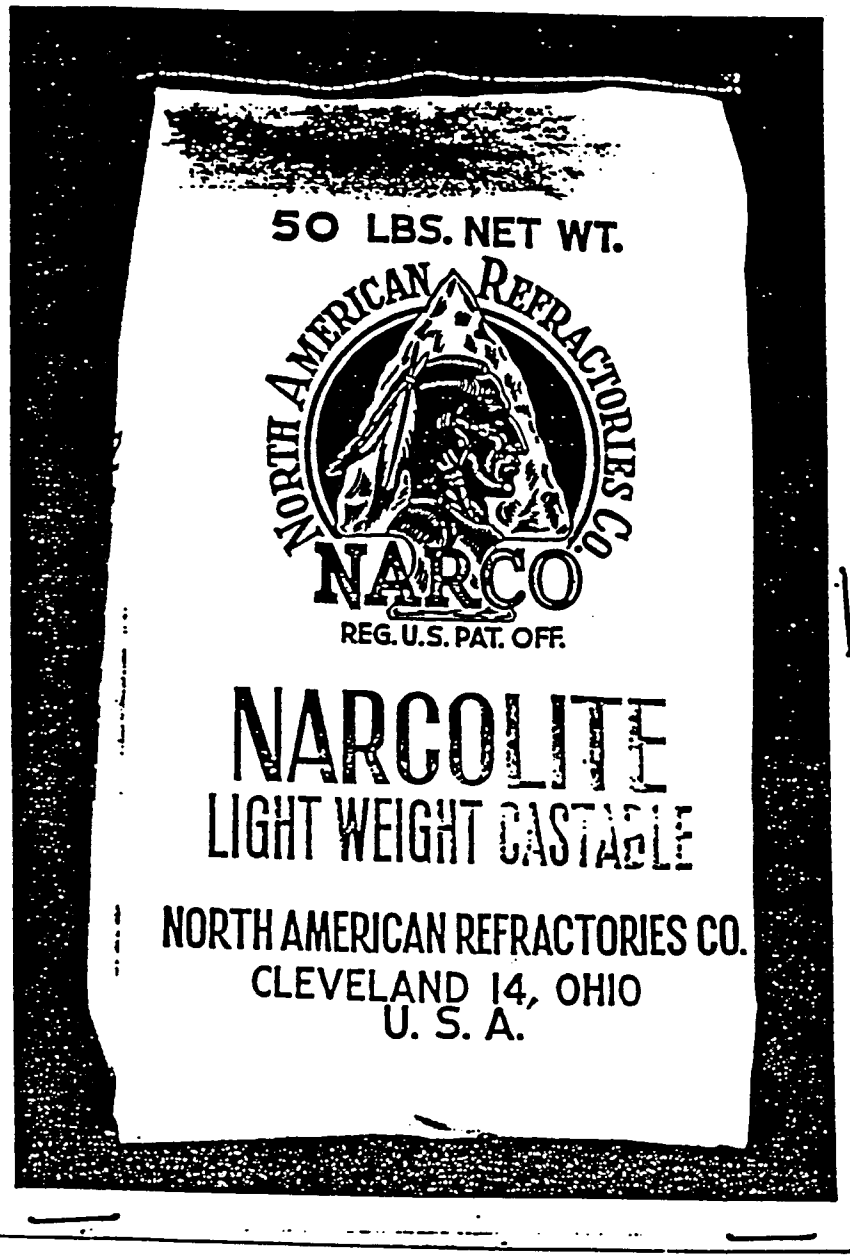
Respectfully submitted,

ROBINSON & McELWEE

By 

Joseph S. Beeson, Esquire
600 United Center, 500 Virginia St. East
Charleston, WV 25326
Counsel for North American Refractories Company

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/3



EXHIBIT

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/4

NARCO FIRECLAY HI-ALUMINA INSULATING BASIC CASTABLES

PRODUCT	TYPE	SERVICE LIMIT °F.	INSTALLED DENSITY LBS. PER CU. FT.	STANDARD CONTAINER
NARCON	Fireclay	2200	117	100 Lb. Bags
NARCOCAST E.S.	Extra Strength Fireclay	2400	121	100 Lb. Bags
NARCOCAST E.S. (FINE)	Extra Strength Fireclay	2400	114	100 Lb. Bags
NARCOCAST E.S. (COARSE)	Extra Strength Fireclay	2400	127	100 Lb. Bags
NARCOHEARTH E.S. (COARSE)	Extra Strength Fireclay	2350	125	100 Lb. Bags
NARCOCAST	Fireclay	2600	118	100 Lb. Bags
NARCOHEARTH	Fireclay	2600	112	100 Lb. Bags
SUPER NARCOCAST	Fireclay	2800	128	100 Lb. Bags
NARCOCAST 30	Hi-Alumina	3000	140	100 Lb. Bags
NARCOCAST 60	Hi-Alumina	3100	145	100 Lb. Bags
NARCOCAST 32	Hi-Alumina	3200	138	100 Lb. Bags
NARCOTAB	Hi-Alumina	3400	160	100 Lb. Bags
ANTI-ERODE	Hi-Alumina (Abr. Res.)	2500	127	100 Lb. Bags
AEROCAST L	Insulating Fireclay	1800	46	50 Lb. Bags
NARCOLITE	Insulating Fireclay	2000	54	50 Lb. Bags

*The Fireclay and Hi-Alumina Castables are also available in bulk containers.

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/5

CAST[illegible]LE REFRACTORI[illegible] (Cont'd)

BRAND	TYPE OF SET	LBS. REQ'D. PER CU. FT. OF CONSTR.	CONTAINERS	RECOMMENDED TEMPERATURE OF USE MINIMUM	RECOMMENDED TEMPERATURE OF USE MAXIMUM	USES
REGULAR CASTABLES (Cont'd)						
◆ NARCOCAST	Hydraulic	116	100 lb. bags	Room	2600° F	New monolithic construction and patching in boilers, coke ovens, furnaces, incinerators, burner blocks and other applications requiring a 2600° F castable.
NARCOHEARTH	Hydraulic	112	100 lb. bags	Room	2600° F	New monolithic construction and patching for applications requiring a 2600° F castable.
◆ SUPER NARCOCAST	Hydraulic	120	100 lb. bags	Room	2800° F	New monolithic construction and patching for furnace linings of all types, soaking pit covers, burner blocks, kilns, combustion chambers, door linings, incinerators.
◆ NARCOCAST 30	Hydraulic	126	100 lb. bags	Room	3100° F	New monolithic construction and patching in forge furnaces, billet, and slab heating furnaces, burner blocks, car tops, soaking pit covers, non-ferrous melting furnaces, crucible furnace lining and others.
◆ NARCOTAB	Hydraulic	160	100 lb. bags	Room	3400° F	New monolithic construction and patching for applications where severe temperatures, loads, abrasion and erosion and similar requirements demanding a pure tabular alumina castable.
◆ ANTI-ERODE	Hydraulic	127	100 lb. bags	Room	2500° F	New monolithic construction and patching wherever conditions of extreme erosion and abrasion exceed the ability of standard castables in the intermediate temperature range.
NARCO BLAST FURNACE CASTABLE	Hydraulic	130	100 lb. bags	Room	3100° F	Designed specifically for gunning applications in new monolithic construction and patching wherever conditions call for a product with abrasion and slag resistance and exceptional high strength.
INSULATING CASTABLES						
◆ NARCOLITE	Hydraulic	54	50 lb. bags	Room	2000° F	New monolithic construction and patching in refinery units, industrial ovens, door linings, boiler water-wall backing, back-up insulation for heavy refractories and high temperature castables.
◆ AEROCAST	Hydraulic	41	50 lb. bags	Room	2000° F	Designed for back-up insulating in new monolithic construction and patching where light weight and insulating values are essential.
◆ AEROCAST L	Hydraulic	38	50 lb. bags	Room	2000° F	Designed for either hot face or back-up insulating in new monolithic construction and patching where light weight and insulating values are essential.
NARCOCRETE	Hydraulic	85	100 lb. bags	Room	2450° F	New monolithic construction and patching for heat treating furnaces, annealing ovens, refinery vessels, driers, boiler baffles and similar applications where light weight and insulation are essential.

◆ Also made in Canada

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/6

NORTH AMERICAN REFRACTORIES COMPANY

Technical Services Department

BULLETIN NO. 18 September 29, 1961

NEW IMPROVED NARCOLITE

Notable improvements have recently been incorporated into NARCOLITE, enhancing its quality and desirability as a lightweight insulating castable. Of particular note resulting from the rearranged blend of constituents making up NARCOLITE is the improvement in its physical and chemical properties, its method of application and its ability now to meet the specifications for oil refinery requirements.

Improvement in NARCOLITE's physical and chemical properties consists of higher structural strength, especially in the intermediate temperature range; commendable volume stability under cyclic operating conditions; and, lower iron content.

NARCOLITE's method of application has now been extended to air placement, as well as pour and trowel, making it universal in use.

NARCOLITE's combination of lightweight, strength and very low thermal conductivity make it an ideal insulation behind hard surface abrasion resistant castables. These features are vitally important when considering refractory materials for oil refinery units utilizing two component linings. Laboratory test reports show that our NARCOLITE, in combination with NARCOCAST E.S. (Fine), meet the requirements in the rigid specifications set by Esso Engineering of New Jersey and Standard Oil of Indiana, and are now considered approved for composite linings.

NARCOLITE is primarily designed to serve as a back-up insulation, however, it also should be considered for single component walls in furnaces operated under favorable conditions.

Some of the suggested wide range of applications NARCOLITE will serve are:

Ducts, Breechings and Stack Linings.	Clinker Coolers.	Preheaters
Boiler Walls, Tube Decks and Baffles.	Incinerator Pits.	Furnace Walls and Roofs.
Combustion Chambers.	Oil Heaters.	Industrial Ovens.
	Hearths.	Special Shapes.
	Door Liners.	

Supplied in dry form, NARCOLITE is ready to mix with water in the field to provide the consistency desired for application. NARCOLITE is packaged in 50 lb. bags and supplied from our Curwensville, Penna. and Farber, Mo. plants.

In installations where refractory weight must be kept to a minimum, and/or

where the fuel and dollar saving benefits of an insualating refractory can be utilized to advantage, NARCOLITE offers the following:

1. Low Heat Storage - In furnaces that operate intermittently, it means savings in fuel consumption, shortens heating-up and cooling down cycle.

2. Flexible Application - Can be gunned, poured or troweled into place.

3. Light in Weight - Approximately 54 lbs. per cubic foot. Offers opportunity to cut cost of supporting steel work.

4. Low Permeability - Provides an effective monolithic sealing layer against air infiltration or gas migration, permitting more efficient furnace control.

5. High Strength - Good structural strength throughout temperature range up to maximum temperature limits.

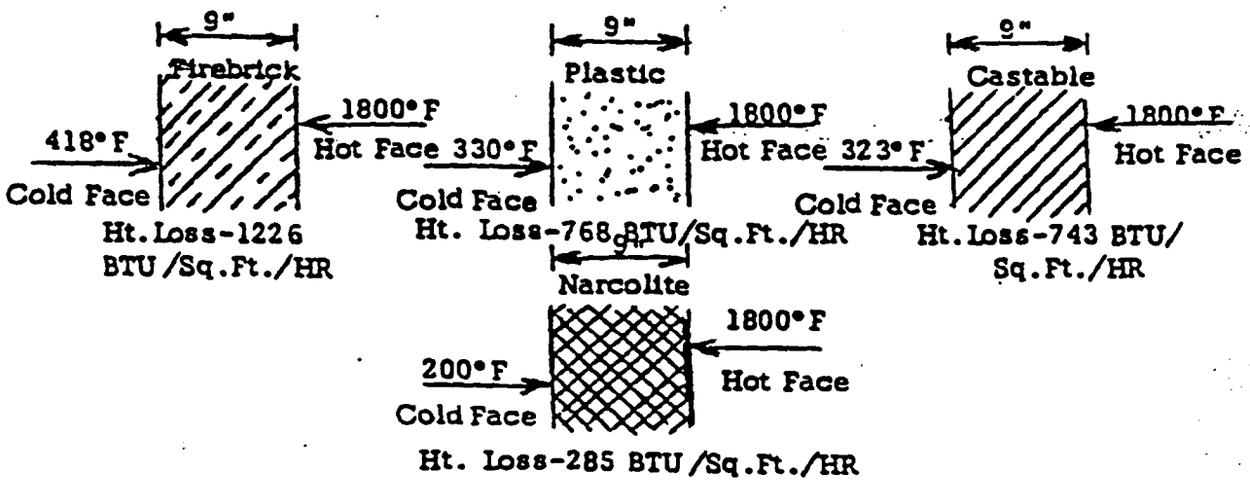
6. Permanence - Absorbs the stresses of expansion and contraction while assisting in holding the wall or structure in positive alignment.

7. Volume Stable - Negligible shrinkage at all service temperatures.

8. Resists Spalling and Thermal Shock - Attributed to its physical structure.

9. Excellent Coverage - Greater coverage per unit weight than with dense castables.

10. High Insulating Properties - Reduces heat transfer as compared to dense refractories. See Illustration Below.



Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/8

A special gun mix, developed as a modification of NARCO BLAST FURNACE CASTABLE and identified as WO-1275, is available for blast furnace stocklines. This gunning material displays good hot strength at intermediate temperatures (1500° to 2000°F), resistance to carbon monoxide disintegration, and volume stability – all necessary properties for good service.

Use of NARCO BLAST FURNACE CASTABLE is not confined to blast furnace installations. Rotary kiln operators have found that the refractory offers an unusually effective maintenance material for their most severe applications.

Basic Gunning Mixes

NARCOGUN S

Containing carbon for added slag resistance, NARCOGUN S is a silicate-bonded, magnesite-based gun mix, well suited for service temperatures ranging from 2000° F to 3300°F. The material is used to maintain hot or cold basic steelmaking vessels – especially in applications where slag resistance is given high priority.

NARCOGUN EF

Developed to maintain hot or cold basic steelmaking furnace hearths and walls, NARCOGUN EF is a silicate-bonded, magnesite-based gun mix. With an in-place density of 150 pounds per cubic foot, the material is well suited for service at temperatures in the 2000° to 3300°F range. NARCOGUN EF can be used for maintenance of electric furnaces, AOD vessels, open hearth furnaces, and BOF's.

NARCOGUN PD-345

This magnesite gunning mix is dry phosphate bonded for extra strength and slag resistance at elevated steelmaking temperatures (to 3300°F). Typical applications of NARCOGUN PD-345 include use as a maintenance material for BOF backup linings – and the installation or repair of linings in pulverized coal fired boilers.

Fireclay Insulating Gunning Mixes

NARCOCRETE GUN

Suitable for service temperatures to 2500°F, NARCOCRETE GUN is a lightweight insulating gun mix suitable for new construction and furnace repairs. The material is being used extensively in maintenance applications as a veneer on the hot face of reheat furnaces to reduce heat losses and fuel costs. It is also well suited for use in petrochemical installations. The material develops high strengths when mixed with water at the gun nozzle. NARCOCRETE GUN is recommended for applications in which a combination of light weight, good insulating properties, and the ability to withstand moderate service temperatures are essential.

NARCOLITE GUN

This hydraulic-setting, lightweight insulating gunning mix was developed principally for applications requiring a product with low iron content, for use in highly reducing atmospheres such as those found in the petrochemical industry. NARCOLITE GUN has a gunned density of only 65 pounds per cubic foot, with a service temperature limit of 2000°F. Its high degree of cost effectiveness comes as a direct result of its excellent insulating efficiency.

AEROGUN

This lightweight material is designed as a back-up insulation for brick or dense castable working linings. When gunned into place it has insulating value, weight, and strength similar to that of insulating firebrick in the 1800°F class. Low initial cost, high coverage, and ease of installation make AEROGUN an extremely economical insulation for various industrial furnaces and boiler settings.

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995)
ACL Doc 21536 · Page 9 of 36
Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/9

High Alumina Gunning Mixes

BRAND	TYPE OF SET	CONDITION AS SHIPPED	LBS. REQ'D. PER CU. FT. OF CONSTR.	CONTAINERS	RECOMMENDED TEMPERATURE OF USE MINIMUM	MAXIMUM	USES
NARPHOS 85 GUN	Chem.	Dry	165	100 lb. bags	300° F	3300° F	Phosphate bonded gun mix for hot and cold surfaces. As a furnace maintenance material for applications where temperature and slag conditions are too severe for lower alumina materials.
NARCOCAST 32 GUN	Hy-draulic	Dry	145	100 lb. bags	Room	3200° F	A high alumina gun mix for applications such as walls, roofs, etc. demanding 3200° F material.
NARCAL 80 GUN	Air Set	Dry	150	100 lb. bags	Room	3100° F	High alumina gun mix for hot or cold gun maintenance.
GUNCAST	Hy-draulic	Dry	135	100 lb. bags	Room	3100° F	High-alumina castable suitable for gun casting into place. Used in power house penthouse areas and soaking pit bottoms.
NARCO BLAST FURNACE CASTABLE	Hy-draulic	Dry	135	100 lb. bags	Room	3000° F	Designed specifically for gunning applications in new monolithic construction and patching wherever conditions call for a product with abrasion and slag resistance and exceptional high strength.

Basic Gunning Mixes

NARCOGUN S	Chem. Bond	Dry	146	100 lb. bags Dump Pack Boxes	2000° F	3300° F	Silicate bonded magnesite based gun mix containing carbon for extra slag resistance. Used to maintain hot or cold basic steelmaking vessels.
NARCOGUN EF	Chem. Bond	Dry	150	100 lb. bags Dump Pack Boxes	2000° F	3300° F	Silicate bonded magnesite based gun mix used to maintain hot or cold basic steelmaking furnace hearths and walls. Also used to maintain AOD vessels.
NARCOGUN PD-345	Chem. Bond	Dry	150	100 lb. bags Dump Pack Boxes	2000° F	3300° F	Magnesite based gun mix containing a dry phosphate binder for lining power plant boiler cyclones, bottoms, and side walls, gun maintenance of BOF backup linings.

Fireclay Insulating Gunning Mixes

NARCOCRETE GUN	Hy-draulic	Dry	100	100 lb. bags	Room	2500° F	Lightweight insulating gun mix for new construction and patching reheat furnaces and for petrochemical industry applications.
NARCOLITE GUNNING MIX	Hy-draulic	Dry	65	50 lb. bags	Room	2000° F	Lightweight insulating gun mix for new monolithic construction, as a back-up insulating material in petrochemical applications.
AEROGUN	Hy-draulic	Dry	28	25 lb. bags	Room	1800° F	For back-up service in furnace walls, roofs, soot hoppers, top decks, drum coverings, etc.

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995)
ACL Doc 21536 · Page 10 of 36
Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/10

Narco Gunning Mixes Application Chart

The table below will be helpful in the selection of NARCO gunning mixes on the basis of key characteristics. Generally, the tabular material deals first with products offering the highest degree of performance characteristics, followed by other materials in descending order with reference to their capability. Because of variations in slag compositions and performance requirements in general, more specific recommendations can be made after a review of individual application conditions.

PRODUCT	RESISTANCE TO DESTRUCTIVE INFLUENCES				
	Temperature				
	Moderate	High	Very High	Slag Action	Abrasion
■ Fireclay Gunning Mixes					
NARCOGUN HMC		•			•
NARCOGUN 28		•			
SUPER NARCOCAST GUN		•			
NARCOCAST GUN		•			
GUNCRETE	•				•
NARCOCAST ES GUN	•				•
NARCOGUN FC-325	•				•
NARCOGUN FCD-342	•				•
■ High Alumina Gunning Mixes					
NARPHOS 85 GUN			•	•	•
NARCOCAST 32 GUN			•		
NARCAL 80 GUN		•			
GUNCAST		•		•	
NARCO BLAST FURNACE CASTABLE		•		•	•
■ Basic Gunning Mixes					
NARCOGUN S			•	•	•
NARCOGUN EF			•	•	•
NARCOGUN PD-345			•	•	•
■ Fireclay Insulating Gun Mixes					
NARCOCRETE GUN	•				
NARCOLITE GUN	•				
AEROGUN	•				

NORTH AMERICAN REFRACTORIES CO.
900 Hanna Building • East 14th & Euclid Cleveland, Ohio 44115 • Phone: 216/621-3200
An ALLIED Company

Litho in U.S.A.

Bulletin 110
5M681

GUNNING MIXES *(Cont'd)*

▶ BRAND	TYPE OF SET	CONDITION AS SHIPPED	LBS. REQ'D. PER CU. FT. OF CONSTR.	CONTAINERS	RECOMMENDED TEMPERATURE OF USE MINIMUM	MAXIMUM	USES
NARCOLITE GUNNING MIX	Hydraulic	Dry	65	50 lb. bags	Room	2000° F	Lightweight insulating gun mix for new monolithic construction, as a back up insulating material in petrochemical applications.
NARCOLINE G	Air Set	Dry	130	100 lb. bags	300° F	2950° F	Slag resistant gun mix for new construction or patching in open hearth and blast furnace runners and similar applications requiring a graphitic gunning mix.
NARCOCAST E.S. GUN	Hydraulic	Dry	127	100 lb. bags	Room	2400° F	Fireclay gun mix for new construction or patching of dust collector systems, ash hoppers, reheat furnaces, etc.
NARCOCAST GUN	Hydraulic	Dry	127	100 lb. bags	Room	2600° F	Fireclay gun mix for new construction or patching when a 2600° F refractory is needed.
SUPER NARCOCAST GUN	Hydraulic	Dry	131	100 lb. bags	Room	2800° F	Fireclay gun mix for new construction or patching of utility boiler walls, soaking pit covers, ladles, etc.
NARCOGUN 28	Hydraulic	Dry	123	100 lb. bags	Room	2800° F	A fireclay gun mix for applications requiring a 2800° F refractory material such as soaking pit wall maintenance, Treadwell ladle maintenance, etc.
NARCO SUPER GUN MIX	Hydraulic	Dry	136	100 lb. bags	Room	3000° F	A special fireclay gun mix for aluminum melting furnace maintenance.
HIGH ALUMINA							
NARCOCAST 32 GUN	Hydraulic	Dry	145	100 lb. bags	Room	3200° F	A high alumina gun mix for applications such as walls, roofs, etc. demanding 3200° F material.
NARCAL 80 GUN	Air Set	Dry	150	100 lb. bags	Room	3100° F	High alumina gun mix for hot or cold gun maintenance.
NARCAL 85 GUN	Air Set	Dry	165	100 lb. bags	300° F	3300° F	Phosphate bonded gun mix for hot and cold surfaces. As a furnace maintenance material for applications where temperature and slag conditions are too severe for lower alumina materials.
BASIC							
NARMAG CM-18 GUN	Air Set	Dry	150	100 lb. bags	Room	3000° F	For lining open hearth doors, open hearth runners, boiler bottom and walls or wherever a chrome material is required. May be gunned or rammed into place.
NARCOAT C	Air Set	Dry	——	100 lb. bags	Room	3200° F	Spray coating material for maintenance of open hearth roofs. May be gunned on hot face of roof brick to extend roof life.
NARCOGUN P-340	Chem. Bond	Dry	150	100 lb. bags	Room	3300° F	Magnesite base gun mix supplied with a liquid phosphate bonding agent for lining power plant boiler bottoms and side walls.
NARCOGUN PD-345	Chem. Bond	Dry	150	100 lb. bags	Room	3300° F	Magnesite base gun mix containing a dry phosphate binder for lining power plant boiler cyclones, bottoms and side walls, gun maintenance of BOF back up linings.
NARMAG O.H. GUN MIX	Air Set	Dry	140	100 lb. bags	Room	3300° F	Magnesite base gun mix for hot gun maintenance of open hearth chill walls and slag pocket walls.

▶ ALSO MADE IN CANADA

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995)
ACL Doc 21536 · Page 12 of 36
Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/12

- **Longer on-line time between repairs**
- **Greater resistance to thermal and chemical attack**
- **Rapid overhaul for shorter boiler downtime**
- **Complete Narco installation**

Higher firing rates. More corrosive slag and ash. More active chemical residues. More intensive boiler operation.

This combination gives power-plant boiler refractory linings extra punishment at a time when the pressure is on to hold down boiler operating and maintenance costs.

There are NARCO Refractories for use at every point in high-pressure high-duty boilers: ash hoppers, slag necks and tanks, cyclone burners, monkeys, sidewalls, and hearths. Each NARCO refractory has been formulated for its particular service in a particular sector of the boiler.

A. Ash Hoppers and Slag Tanks:
Probably the severest service in the boiler. Combination of high temperatures, chemical attack, and physical impact of falling clinkers and slag.
Two Types: Wet-bottom hoppers and Dry-bottom hoppers. (Dry-bottom hoppers may contain water to cool the ash and cushion the ash drop.)
NARCO Refractories:
GUNCRETE
NARCOCAST E.S. GUN

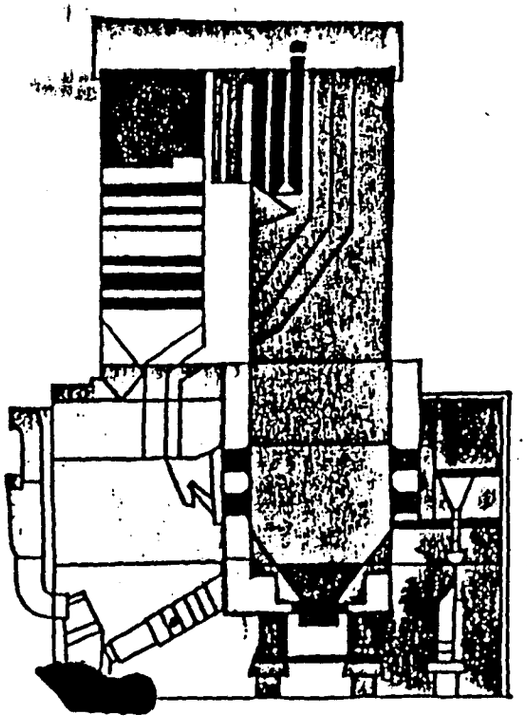
B. Hearths:
NARCO Refractories:
NARCOGUN PD-345
NARCHROME CASTABLE

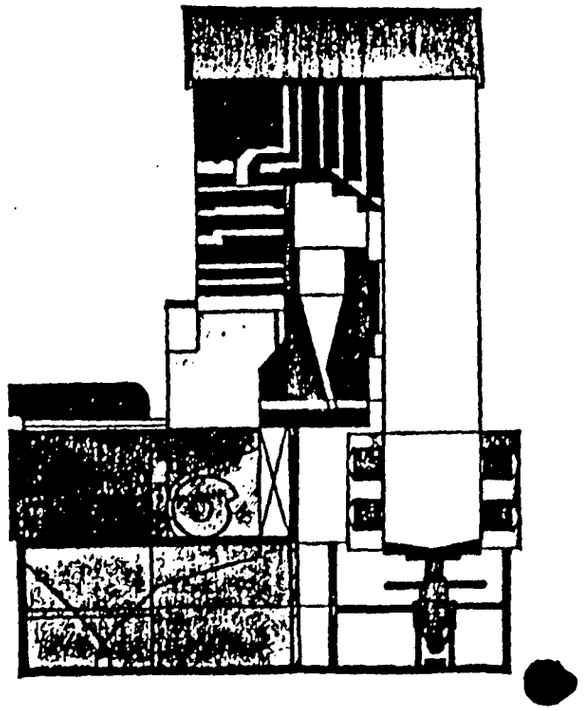
Subhearths:
SUPER NARCOCAST
NARCOCAST 30

C. Burner Throats:
NARCO Refractories:
NARPHOS 85 TP PLASTIC
NARPHOS 90 TP PLASTIC

D. Walls:
NARCO Refractories:
SUPER NARCOCAST GUN MIX
NARCO BLAST FURNACE CASTABLE
NARPHOS 85 GUN

E. Miscellaneous:
NARCO Refractories:
Penthouse Area: GUN CAST
Breeching: AEROGUN GUN MIX
Brickwork: NARCOSET Mortar
Tangent Tubes: SUPER-CHIEF Mortar
Back-up: NARCOBLOCK INSULATION





Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/13

THE REFRACTORIES INSTITUTE • SUITE 1517 • 301 FIFTH AVE • PITTSBURGH, PA 15222 • 412/281-6

September 15, 1986

To the Members of the Safety & Health Committee:

SUBJECT: OSHA ASBESTOS STANDARD

OSHA announced its Standard for Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite (51 FR 22612), June 17, 1986. R. T. Vanderbilt Company subsequently filed suit regarding the standard, which resulted in OSHA granting a temporary nine month stay of those portions of the standard which apply to non-asbestiform tremolite, anthophyllite and actinolite. A copy of OSHA's July 18, 1986 letter to counsel for R. T. Vanderbilt Company is enclosed for your information and action.

OSHA is to announce a reopening of the rulemaking and will request comments regarding regulation of non-asbestiform tremolite, anthophyllite and actinolite.

Now is the time to formulate your comments and recommendations, prior to OSHA's announcement. Safety and Health Committee members are encouraged to send comments to TRI by OCTOBER 31, 1986. This will be an item on the next Safety and Health Committee Meeting agenda.

Sincerely yours,

Charles G. Marvin
Vice President

fs

encl.

cc: TRI Counsel
Committee Coordinator
Hazardous Substances Committee

EXHIBIT 8

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995)
ACL Doc 21536 · Page 14 of 36
Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/14

U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, DC 20210

JUL 18 1986

Dennis M. Race
Akin, Gump, Strauss,
Hauer & Feld
1333 New Hampshire Ave., N.W.
Suite 400
Washington, D.C. 20036

Dear Mr. Race:

This is in response to your July 14, 1986 letter on behalf of R. T. Vanderbilt Co. in which you request that OSHA reconsider your request for a stay of the provisions of the revised standards promulgated June 17, 1986 governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite, to the extent the standards regulate occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite (51 Fed. Reg. 22612 et. seq.). The revised standards, which amend OSHA's 1972 asbestos standard, 29 CFR 1910.1001 (1985), are scheduled to take effect July 21, 1986.

For the reasons indicated below, I am granting a temporary stay of 9 months (until April 21, 1987) of the effective date of the revised standards insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite. This stay is granted for the purpose of reopening the record and instituting supplemental rulemaking limited to the issue of whether non-asbestiform tremolite, anthophyllite and actinolite should continue to be regulated in the same standards and to the same extent as asbestos, or should be treated in some other way. This stay applies only to the application of the revised standards to non-asbestiform tremolite, anthophyllite and actinolite. In all other respects, the revised standards will take effect as previously scheduled.

It should be noted that during the pendency of the stay, the provisions of the 1972 standard governing occupational exposure to asbestos (29 CFR 1910.1001 (1985)) will remain in effect with respect to regulation of non-asbestiform tremolite, anthophyllite and actinolite. (See 51 Fed. Reg. at 22732).

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/15

OSHA is granting this temporary stay in part to enable the Agency to review a July 17, 1986 letter from the Director of the National Institute for Occupational Safety and Health (NIOSH) and certain related NIOSH staff memoranda which have recently been brought to its attention, as well as submissions by the R.T. Vanderbilt Co. and various trade associations concerning the appropriateness of regulating non-asbestiform tremolite, anthophyllite and actinolite in the revised asbestos standards.

OSHA believes, as stated in our July 9, 1986 letter, that it provided adequate notice to the public that its recent asbestos rulemaking would address whether the Agency should amend the 1972 definition of asbestos, and the proper scope of the revised standards with respect to the three non-asbestiform minerals. However, OSHA acknowledges that letters and petitions from rulemaking participants and non-participants have been received since the revised standards' June 17, 1986 issuance, which contain additional comment, assertions, and information which the rulemaking record may not fully reflect, and which request an opportunity to submit further information on these questions. To assure that these submissions are fully considered by OSHA, to allow public comment on these additional submissions, and to invite additional comment and evidence on all issues relevant to regulation of non-asbestiform tremolite, anthophyllite and actinolite, OSHA will shortly by Federal Register notice reopen the rulemaking record on the limited issue of whether non-asbestiform tremolite, anthophyllite and actinolite should continue to be regulated as presenting the same health risk as asbestos, or should be treated in some other way.

Sincerely,

John A. Pendergrass
Assistant Secretary of Labor

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/16

THE REFRACTORIES INSTITUTE
1102 ONE OLIVER PLAZA
PITTSBURGH, PA. 15222
412-281-6787

OFFICE OF THE PRESIDENT

May 1, 1978

To the Members of the Environmental Protection Committee:

R. E. Besalke, Chairman	A. P. Green Refractories Company
R. B. Arthur	North State Pyrophyllite
R. B. Crawford	Harbison-Walker Refractories
G. J. Fink	Basic Refractories
R. F. Grady	Martin Marietta Chemicals
R. H. Giffin	North American Refractories
Paul Klauss	General Refractories Company
L. H. Lamar	Babcock & Wilcox Company
C. E. Lindsay	Kaiser Refractories
S. C. Porter	Globe Refractories
J. R. Wohler	Freeport Brick Company

Subject: Suspected Carcinogens

Attached is the list of chemical substances classified by NIOSH as suspected carcinogens which some refractory producers use in their laboratory and/or manufacturing operation. This is the list I referred to in my remarks at the committee meeting on April 18th. You may recall that this list was used by the Safety and Health and Toxic Substances Committees for preliminary indications of how extensive a problem the industry might have if the proposed OSHA regulations were issued as proposed. At your request, we will use it in a similar fashion in anticipation of new programs from the EPA.

Would you please review this list and determine to the best of your current knowledge:

1. Which, if any, of these substances are currently being discharged from your plants and the method of discharge (air, water, etc.);

2. Are there any other suspected toxic substances and/or suspected carcinogens being discharged? If so, which ones and how?

The information you report will be held in strict confidence and used only for the purpose of compiling a master list for reference purposes. No other action by committee members is required at this time.

Please report back whether or not you have any chemicals to add to this list so I can be sure everyone has completed the review. It is obvious from the list that a very broad range of chemical substances is involved. If you are in doubt about whether a chemical substance being discharged is considered carcinogenic or not, report it anyway, and I will check it against the NIOSH master list of suspects to see whether it belongs on our final list.

Very truly yours,

J. William Widing, Jr.

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995) Published by AsbestosClaims.Law
ACL Doc 21536 · Page 17 of 36 asbestosclaims.law/library/21536/17

A PRELIMINARY LIST OF CHEMICAL SUBSTANCES
LISTED IN NIOSH PUBLICATION 77 - 149
REPORTED BY SOME REFRACTORIES PRODUCERS

OSH NO	PRIME NAME OF COMPOUND (with alternates mentioned)	RANK CODE	COMMENTS
52500	Acetic Acid, (Ethylenedinitrilo) Tetra-,Trisodium Salt Syn: EDTA Trisodium Salt	0000	Status: Currently tested by NCI for carcinogenicity by standard bioassay protocol as of April 1976
52500	Acetic Acid, Lead (2+) Salt	4111	Toxic Effects: Carcinogenic
7000	Acetic Acid, Nitrilotri- Trisodium Salt, Monohydrate	----	Status: Currently tested by NCI for carcinogenicity by standard Bioassay Protocol as of April 1976
31500	Acetone	0000	Status: Undergoing NCI testing 4/76
93500	Anthracene(coaltar pitch component)	4112	Toxic Effects: Carcinogenic, Neoplastic
36750	Arsenious Acid, Monosodium Salt	0000	Review: Carcinogenic determination: human suspected
64750	Asbestos	4103	Toxic Effects: Carcinogenic Review: Carcinogenic determination-human positive
14000	Benzene	7222	Toxic Effects: Carcinogenic, Neoplastic Review: Carcinogenic determination: human suspected
64750	Benzene, Nitro	0000	
7000	2-Biphenylol, Sodium Salt Syn: Dowicide	----	
45500	Boric Acid Syn: Orthoboric Acid	3101	Toxic Effects: Neoplastic
64750	2-Butanone Syn: Ethyl Methyl Ketone; Ketone, Ethyl Methyl; Ethyl Ketone, Methyl	0000	
66500	Carbon Disulfide	0000	Status: Undergoing NCI testing 4/76
49000	Carbon Tetrachloride	4313	Toxic Effects: Carcinogenic, Neoplastic

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/18

	Carbowax 1000		see: TQ35000
157000	Cellulose, Carboxymethyl Ether	0000	Status: Undergoing NCI testing 4/76
159500	Cellulose, Carboxymethyl Ether, Sodium Salt Syn: Carboxymethylcellulose, sodium salt; sodium carboxymethyl cellulose	4101	Toxic Effects: Neoplastic
	Chromate of soda		See: GB29550
128500	Chromic acid, Chromium (3+) salt (3:2)	----	IARC Review: carcinogenic determination: animal positive Toxic Effects: Neoplastic
129400	Chromic acid, Dipotassium salt	3111	Toxic Effects: Neoplastic IARC Review: carcinogenic determination: animal suspected
129550	Chromic acid, Disodium salt Syn: Chromate of soda	0000	IARC Review: Indefinite
140250	Chromite	----	Toxic Effects: Neoplastic IARC Review: carcinogenic determination: animal positive
142000	Chromium	4102	Toxic Effects: Neoplastic IARC Review: carcinogenic determination: animal suspected
164750	Chromium (III) oxide (2:3)	4102	Toxic Effects: Carcinogenic IARC Review: carcinogenic determination: animal suspected Status: NIOSH candidate subject for hazard review (carcinogensis)
166500	Chromium (VI) oxide (1:3)	7202	Toxic Effects: Carcinogenic IARC Review: Indefinite
185750	Coal tar, aerosol	----	Toxic Effects: Neoplastic
311090	Cobalt (II) nitrate (1:2)	2101	Toxic Effects: Neoplastic
328000	Cobalt (2+) oxide	4101	Toxic Effects: Carcinogenic
348000	1,3,2-Dioxathiolane 2,2-dioxide	----	Toxic Effects: Neoplastic

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/19

78000	Diphenyl Amine	0000	
	EDTA Trisodium Salt		See: AH52500
29750	Ethane, 1,1,1-Trichloro Syn: 1,1,1-Trichloroethane	0000	Status: Undergoing NCI testing 4/76
85750	Ethanol, 2-Butoxy Syn: Ethylene Glycol, Monogutyl Ether	0000	
63000	Ethyl Alcohol Syn: Ethanol	3112	Toxic Effects: Carcinogenic
03500	Ethylene, Chloro-,Polymer Syn: Polyvinyl Chloride	4101	Toxic Effects: Neoplastic IARC Review: Indefinite
36750	Ethylenediamine,N,N'-Diethyl-Dinitroso	----	Toxic Effects: Carcinogenic
	Ethylene Glycol, Monobutyl Ether		See: KJ85750
24500	Ethylene Oxide	----	IARC Review: Indefinite
54250	Fluorescein, Disodium Salt	4101	Toxic Effects: Neoplastic
47250	Hexamethylenetetramine	4101	Toxic Effects: Neoplastic
74000	Iron (III) Oxide	0000	IARC Review: Indefinite
85000	Iron (II) Sulfate (1:1)	3101	Toxic Effects: Neoplastic
49000	Magnetite	3101	Toxic Effects: Neoplastic
45500	Mercury	4101	Toxic Effects: Neoplastic
50750	Methacrylic Acid, Methyl Ester	4101	Toxic Effects: Carcinogenic
	Mylar		See: TQ79000
	Nitrilotriacetic Acid		See AJ01750

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/20

PRELIMINARY LIST OF CHEMICAL SUBSTANCES (continued)

\12250	Nitrous Acid, Sodium Salt	0000	Status: Undergoing NCI testing 4/76
;22750	9-Octadecenoic Acid, (Z) Syn: Oleic Acid	2101	Toxic Effects: Neoplastic
	Oleic Acid		See: RG22750
<43750	Olivine	3101	Toxic Effects: Neoplastic
	Orthoboric Acid		See: ED45500
:71750	Petroleum	3121	Toxic Effects: Neoplastic
:73500	Petroleum Asphalt Syn: Asphalt (steam refined)	----	Toxic Effects: Neoplastic
:71750	Phenanthrene (coaltar pitch component)	3121	Toxic Effects: Neoplastic
)33250	Phenol	3121	Toxic Effects: Carcinogenic Status: Undergoing NCI testing 4/76
463000	Phenol, Pentachloro Syn: Dowicide G	3101	Toxic Effects: Neoplastic
:95000	Phosphoric Acid, Trisodium Salt	0000	
)33250	Polyethylene	4202	
'5000	Polyethylene Glycol Syn: Carbowax	3101	Toxic Effects: Carcinogenic
)79000	Polyethylene Terephythalate film Syn: Mylar	----	Toxic Effects: Neoplastic
\15800	Polynuclear Aromatic Hydrocarbons	----	
	Polystyrene		See WL64750
381000	Polyvinyl Alcohol Syn: PVA	----	Toxic Effects: Carcinogenic

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/21

	Polyvinyl Chloride		See:KV03500
	PVA		See: TR81000
	Quartz		See: VV73300
U24500	Serpentine	3101	Toxic Effects: Neoplastic
V73300	Silica, Crystalline-Quartz Syn: Quartz; Silica Flour (powdered crystalline silica); Silicon Oxide,DI-(Sand)	----	Toxic Effects: Neoplastic
	Silica Flour (powdered crystalline silica)		See: VV73300
	Silicon Oxide,DI-(Sand)		See: VV73300
W35000	Silver	4101	Toxic Effects: Neoplastic
Y80500	Sodium Azide	0000	Status: Undergoing NCI testing 4/76
	Sodium Bisulfate		See: WT111100
Z47250	Sodium Chloride	0000	Status: Undergoing NCI testing 4/76
	Sodium Chromate		See: GB29550
I44600	Stearic Acid, Methyl Ester	3101	Toxic Effects: Neoplastic
L64750	Styrene Polymer	4101	Toxic Effects: Neoplastic
T111100	Sulfuric Acid, Monosodium Salt Syn: Sodium Bisulfate		
W50750	Tannic Acid	4101	Toxic Effects: Carcinogenic IARC Review: carcinogenic determination: animal positive
R22750	Titanium Oxide Syn: Titanium Dioxide	0000	Status: Undergoing NCI testing 4/76
	Titanium Dioxide		See XR22750
S52500	Toluene	0000	
R62500	Urea	0000	Status: Undergoing NCI testing 4/76

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/22



THE REFRACTORIES INSTITUTE
1102 OLIVER PLAZA
PITTSBURGH, PA. 15222

July 18, 1978

To: The Official Representative of Each
Active and Associate Member Company
in the United States:

Subject: PRELIMINARY CLASSIFICATION OF
SUSPECTED CARCINOGENS

The day after the Institute's testimony at the OSHA hearings on suspected carcinogens, OSHA released its long-awaited preliminary classifications. While these lists are only tentative and subject to change as the rulemaking process continues, they do give us the first authoratative indication of how chemical substances in use in the refractories industry may be controlled.

I am attaching a list of OSHA's proposed Category I, II and III classifications for chemicals reported by members of the TRI Safety and Health Committee as being in use in the industry. There are 14 substances classified as Category I, five as Category II, 22 as Category III, and one (Silica) classified both as Category II and III---a situation I am trying to clarify.

Needless to say, I was disappointed to see so many Category I classifications for our industry. Chromium compounds received more attention than I expected, but coal tar and coal tar pitch compounds received less. Remember, however, that these are only tentative classifications.

CATEGORY I

Exposure to substances classified as Category I is considered to constitute "a grave danger" and such chemicals are proposed to be regulated most stringently, first under an emergency standard, then under a permanent standard designed to reduce workers' exposure to the "lowest feasible level" or possibly zero if substitutes are available. Activities required of manufacturers or processors by the proposed permanent standard include (i) exposure monitoring and measurement; (ii) regulated (limited access) areas; (iii) control through engineering and work practices; (iv) respiratory protection; (v) protective clothing and equipment; (vi) housekeeping; (vii) waste disposal; (viii) hygiene facilities; (ix) medical surveillance; (x) employee training; (xi) precautionary signs and labels; and (xii) recordkeeping. The extent of these activities would be similar to those discussed at the May membership meeting in connection with the proposed silica standard, but the cost impact would probably vary from substance to substance.

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995) Published by AsbestosClaims.Law
ACL Doc 21536 · Page 23 of 36 asbestosclaims.law/library/21536/23

CATEGORY II

Category II substances are potential carcinogens for which the evidence is "only suggestive" rather than convincing. They would be regulated less stringently, but the regulation would require most of the activities mentioned above in one form or another. A major difference is that exposure limits, instead of being at the "lowest feasible level", are to be set at the level of existing OSHA standards (29 CFR 1990.1000), or (where none exists) at "an appropriate level based upon acute or chronic effects of exposure...other than carcinogenicity", or, if the present OSHA standard is inadequate to prevent those effects, it shall be lowered by the Secretary to an "appropriate" level. Also, there is no emergency standard provision for Category II substances, nor a requirement for regulated areas, nor the need for special lunchrooms. The difference in the cost of compliance for a Category I classification compared to Category II for a given substance could vary from trivial to catastrophic, depending upon the difference, if any, between an "appropriate level" to prevent acute or chronic effects from exposure and the "lowest feasible level".

CATEGORY III

Category III substances require no special new controls but since they are recognized toxic substances there may already be recommended or regulated exposure limits which should still be followed. Category III substances can of course, be upgraded to II, or II to I, if new test results or other convincing scientific information is forthcoming.

STRATEGY

If the OSHA procedure is adopted as proposed and these classifications are upheld, it is obvious that many extremely expensive and far-reaching changes in how the industry does business will be required. This is not the time to throw in the towel, however. It is the time to get to work on developing a counterstrategy. If you have any data on these Category I or II classifications which would indicate they are incorrect (overly stringent), now is the time to get it together. In fact, if you can get such information in my hands by August 1, I can have it included in the post-hearing record. Of particular interest here is the question of whether Chromium (III) should be controlled to the same degree as Chromium (VI), as well as the question of whether either deserves a Category I classification.

Beyond that, it will take further discussions and planning to decide how TRI should respond to these initial classifications. One thing seems clear to me, however, and it is this: we stand a much better chance of softening their impact if we start work immediately instead of waiting for OSHA to publish final classifications. The time for response later when a notice of proposed rulemaking appears in the Federal Register will be far too short to accomplish anything of significance.

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/24

I would appreciate hearing from each member who expects to be affected by these classifications as quickly as possible during the post-hearing comment period.

Very truly yours,

J. William Widing, Jr.
President

JWW/hm

cc: Environmental Protection Committee
Safety and Health Committee
Technical Advisory Committee
Toxic Substances Subcommittee
H. W. Fulton, Jr.

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/25

PRELIMINARY CLASSIFICATION OF SUSPECTED CARCINOGENS REPORTED BY SOME REFRACTORIES PRODUCERS

CATEGORY I

Acetic acid, Lead (2+) salt
Asbestos
Benzene
Carbon Tetrachloride
Chromic acid, Chromium (3+) salt (3:2)
Chromic acid, Dipotassium salt
Chromic acid, Disodium salt
Chromite
Chromium
Chromium (III) oxide (2:3)
Chromium (VI) oxide (1:3)
Ethylenediamine, N,N'-Dimethyl-N,N' Dinitroso
Serpentine
Tannic acid

CATEGORY II

Ethyl alcohol
Iron (III) oxide
Petroleum
Petroleum asphalt
Phenanthrene
Silica, Crystalline (also Category III)

CATEGORY III

Anthracene
Boric acid
Brucite
Cellulose, Carboxymethyl ether, Sodium salt
Cobalt (II) nitrate (1:2)
Cobalt (2+) oxide
Ethylene oxide
Fluorescein, Disodium salt
Hexamethylenetetramine
Iron (II) sulfate (1:1)
Magnetite
Mercury
9-Octadecenoic acid (Z) (Syn: Oleic acid)
Olivine
Phenol
Phenol, Pentachloro- (Syn: Dowicide G)
Polyethylene
Polyethylene glycol (Syn: Carbowax)
Polyvinyl alcohol (Syn: PVA)
Silica, crystalline (also Category II)
Silver
Stearic acid, Methyl ester
Styere polymer

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/26

administrator has a "heavy burden" to "explain the basis for his decision to permit the continued use of a chemical known to produce cancer in experimental animals." *EDF* v. *Ruckelshaus* (DDT), 439 F.2d 584, 596 n.41 (D.C. Cir. 1971); *accord, EDF* v. *EPA* (heptachlor and chlordane), 584 F.2d 998, 1005 (D.C. Cir. 1978), *cert. denied*, 431 U.S. 925 (1977); *EDF* v. *EPA* (aldrin and dieldrin), 510 F.2d at 1302; *see EDF* v. *Department of Health, Education and Welfare*, 428 F.2d at 1090–92. When firm evidence establishes that a chemical is a carcinogen, statutes generally leave an administrator no alternative but to step in to protect the public.

"On the other hand, when the evidence is less than firm, but merely suggests that a chemical may be a carcinogen, the same "heavy burden" may not attend administrative inaction. The decision to act in such a case has been held to fall within the discretion of the Administrator. For example, in *Reserve Mining Co.* v. *EPA*, 514 F.2d 492 (8th Cir. 1975) (en banc), EPA sought to abate discharge of mining refuse into Lake Superior "under an acceptable but unproved medical theory," that the discharges were carcinogenic. 514 F.2d at 529. The court concluded that the discharges should be abated, even though there would be a heavy cost, including possible loss of many jobs, to the local economy. Id. at 514–20, 535–40. Similarly, in *Certified Color Manufacturers Association* v. *Mathews*, 543 F.2d 284 (D.C. Cir. 1976), the Food and Drug Administration (FDA) terminated its provisional approval of a color additive used to dye food on the basis of a vigorously debated study of the additive's carcinogenic effects. This court concluded that the FDA action should be upheld, based upon FDA's scientific judgment that the study was not conclusive, but was merely suggestive of carcinogenicity. Id. at 297. "Courts have traditionally recognized a special judicial interest in protecting the public health, particularly where "the matter involved is as sensitive and fright-laden as cancer." Where the harm envisaged is cancer, courts have recognized the need for action based upon lower standards of proof than otherwise applicable." Id. at 297–98 (footnotes omitted) quoting *EDF* v. *EPA* (DDT), 465 F.2d 528, 538 (D.C. Cir. 1972). The courts have frequently upheld regulations based on evidence of carcinogenic effects. See, e.g., *American Iron & Steel Institute* v. *OSHA*, No. 76–2358, slip op. at 31–32 (3d Cir. March 28, 1978) (coke oven emissions); *Society of the Plastics Industry* v. *OSHA*, 509 F.2d at 1311 (vinyl chloride); *Synthetic Organic Chemical Manufacturers Association* v. *Brennan*, 503 F.2d 115, 1159–60 (3d Cir.) (same), *cert. denied*, 420 U.S. 973 (1974).

"These cases demonstrate that inevitable tension attending regulation of carcinogens. Frequently, such regulations have severe economic impact. Indeed, sometimes, as alleged by industry petitioners in this case, such regulations may jeopardize plants or whole industries, and the jobs depending on them. In such circumstances, the temptation to demand that the agency furnish conclusive proof of carcinogenicity as support for the regulations is great. However, the decision to delegate authority to an agency to control suspected carcinogens is a legislative judgment that is not open to question in this court. Congress's direction to EPA to protect against incompletely understood dangers could not be carried out if we were to adopt the proof requirements advocated by industry petitioners."

This proposal marks a departure from OSHA's usual pattern of a substance-by-substance approach in setting health standards concerning exposures to potential occupational carcinogens. For the reasons set forth herein, OSHA believes that such an approach is not only proper and necessary but in fact compelling because of its "experience gained under this and other health and safety laws". (The Act, section 6(b)(5).) Moreover, OSHA believes that by establishing a rational and predictable policy concerning the regulation of exposures to occupational carcinogens, employers, employees, the general public, the scientific community and public interest groups will not only benefit from improved employee health, but also experience greater efficiencies in their own activities.*

Employees are exposed to many substances on a daily basis. Obviously, most of these substances are not carcinogenic. Yet, some may be. OSHA believes that this general policy and procedure will facilitate the sifting through the evidence concerning substances which may be imputed to be potential carcinogens and the application of uniform, predictable criteria in order to assess whether such substances should indeed be treated as carcinogenic. Without such a system and appropriate criteria, OSHA believes that this task cannot be accomplished in a timely and efficient manner. With an appropriate system and criteria, worker health will be protected efficiently without rediscussing or relitigating, time and time again, the same issues and without unnecessarily draining limited industry, union, public interest, scientific and government resources. As a result of this policy, OSHA believes that these limited resources will focus on the most substantial issues in OSHA rulemaking proceedings, thus leading to more compact and useful Records in a shorter period of time. In addition, this policy will result in continuity of approach, even in the face of changes of policymakers. This new approach is intended to ameliorate certain administrative problems in standard setting. One significant aspect of past rulemakings concerning carcinogens was the enormous time period between OSHA's initial Federal Register notices and final judicial actions. For example, in its nine (9) year history, OSHA has concluded only seven (7) rulemaking proceedings in regulating carcinogens. Moreover, it should be noted that the total time the official process took from the date of the first official announcement in the Federal Register to completion of the judicial review of the final standard does not necessarily include the time required to analyze the facts and develop the proposal in the first instance, which itself can be considerable.** Finally, it should be noted that the procedures followed in each of the following cases differed because of an attempt to speed up the process. None of the differing procedures succeeded in achieving that goal.

a. Asbestos

An emergency temporary standard regulating occupational exposures to asbestos was published on December 7, 1971 (36 FR 23207) and not judicially contested; a permanent standard was proposed on January 12, 1972 (37 FR 466) and, after a short hearing, was published in final form on June 7, 1972 (37 FR 11318); the permanent standard was contested in *Industrial Union Department, AFL–CIO* v. *Hodgson* on July 27, 1972, and affirmed in 499 F.2d

*While OSHA will not elaborate upon the lengthy time consuming "case-by-case" rulemakings experienced by other agencies under other statutes, an excellent discussion of the same problems appears in McGarity, "Substantive and Procedural Discretion in Administrative Resolution of Science Policy Questions: Regulating Carcinogens in EPA and OSHA", 67 Georgetown Law Journal 724 (February 1979). Also see Berger and Riskin, Economic and Technological Feasibility in Regulating Toxic Substances Under the Occupational Safety and Health Act, 7 Ecology Law Quarterly 285 (1978). The scientific commentators have also recommended a generic, rather than a case-by-case approach, to regulating carcinogens for the same reasons. See National Academy of Sciences—National Research Council, Decisionmaking for Regulating Chemicals in the Environment 33 (1975).

**Only two other health standards have been promulgated during the history of OSHA namely: standards regulating occupational exposures to inorganic lead and cotton dust. In the case of the standard regulating occupational exposure to lead, the proposed final standard was published on October 3, 1975 (40 FR 48634), extensive hearings held and the final standard published on November 14, 1978, a process that took over 36 months. An appeal is pending in the Court of Appeals for the District of Columbia in *Lead Industries, Inc.* v. *OSHA*. In the case of the standard regulating occupational exposure to cotton dust, an advance notice of proposed rulemaking was published on December 27, 1974 (39 FR 44769), a proposed permanent standard published on December 28, 1976 (41 FR 56498), extensive hearings held in April and May of 1977, and final standards published as to Cotton Dust and Cotton Dust in Cotton Gins on June 23, 1978 (43 FR 27350 and 27418), a process that took over 42 months. Appeals were recently decided by the Court of Appeals for the District of Columbia in *AFL–CIO* v. *Marshall* and *Texas Independent Ginners Assoc.* v. *Marshall*.

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995)
ACL Doc 21536 · Page 27 of 36
Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/27

467 on April 17, 1974, the entire process consuming about 29 months.*

b. Fourteen Carcinogens

On July 6, 1972, OSHA requested information concerning fifteen substances (37 FR 13285). A package of fourteen (14) emergency temporary standards regulating occupational exposures to a like number of carcinogens was published on May 3, 1973 (38 FR 10929), contested in part in *Dry Color Manufacturers' Assn.* v. *Brennan* and vacated on October 4, 1973 by the Third Circuit Court of Appeals at 486 F.2d 98; an advisory committee was appointed and began its meetings on June 25, 1973, the proposed permanent standard was published on July 16, 1973 (38 FR 18600) and amended on August 16, 1973 (38 FR 22141), a hearing was held in September 1973 and the final standard published on January 29, 1974 (39 FR 3756), contested in *Synthetic Organic Chemical Manufacturers Assn. (SOCMA)* v. *Brennan* I (EI) on January 29, 1974 and *SOCMA* v. *Brennan* II (MOCA) on February 4, 1975. In *SOCMA* v. *Brennan* I, the Third Circuit affirmed in part in 503 F.2d 1155 on August 26, 1974, *cert. den.* on March 17, 1975 in 420 U.S. 973. A petition for rehearing was denied on October 6, 1975. In *SOCMA* v. *Brennan* II, the Third Circuit affirmed in 506 F.2d 385 on December 17, 1974. A petition for certiorari was filed on March 20, 1975 and denied by the Supreme Court on October 6, 1975 *sub nom. Oil, Chemical and Atomic Workers* v. *Dunlop* in 423 U.S. 830. The entire process consumed about 40 months.

c. Vinyl chloride

A fact-finding hearing concerning vinyl chloride was announced on January 30, 1974 (39 FR 3874) and held on February 15, 1974. An emergency temporary standard regulating occupational exposure to vinyl chloride was published on April 5, 1974 (39 FR 12341) and not judicially contested, a proposed permanent standard was published on May 10, 1974 (39 FR 16896), the permanent standard published on October 4, 1974, (39 FR 35892), contested in *The Society of the Plastics Industry* v. *OSHA* on October 1, 1974, and affirmed in 509 F.2d 1301 on January 21, 1975, *cert. den. sub nom. Firestone Plastics Co.* v. *U.S. Department of Labor* in 421 U.S. 992, on May 27, 1975, the entire process consuming 15 months.

d. Coke oven emissions

An advisory committee concerning occupational exposures to coke oven emissions was appointed on August 12, 1974, and held twenty-eight days of meetings during which testimony was presented by numerous experts and parties and over 200 exhibits received. the proposed permanent standard was published on July 24, 1975 (40 FR 30849), promulgated on October 22, 1976 (41 FR 46742), contested in *American Iron and Steel Institute* v. *OSHA* on October 23, 1976, and affirmed in 577 F.2d 825 on March 28, 1978, petition for *certiorari pending* in the United States Supreme Court, the entire process consuming 66 months so far.

e. Arsenic

An advance notice of proposed rulemaking concerning occupational exposures to inorganic arsenic was published on June 11, 1974 (39 FR 20494), a fact-finding hearing was announced on August 30, 1974 (39 FR 31644), held on September 20, 1974, a proposed standard was published on January 21, 1975 (40 FR 3392), a final permanent standard published on May 5, 1978 (43 FR 19584), contested in *ASARCO* v. *OSHA* on May 5, 1978 and judicial review is pending in the Ninth Circuit Court of Appeals and decision has been deferred pending the result of the Supreme Court decision in the case of the contested standard regulating occupational exposures to benzene, *infra*. The entire ongoing process has therefore consumed 67 months.

f. Benzene

An emergency temporary standard regulating occupational exposures to benzene was published on May 3, 1977 (42 FR 22516), stayed in *API* v. *OSHA* by the Fifth Circuit Court of Appeals on May 20, 1977, a proposed permanent standard was published on May 27, 1977 (42 FR 27452), published in final form on February 10, 1978 (43 FR 5918), contested in *American Petroleum Institute* v. *OSHA* on February 2, 1978, and vacated in 581 F.2d 493 on October 5, 1978, *certiorari granted* in *Marshall* v. *API* 440 U.S. 906 on February 21, 1979 by the United States Supreme Court, the entire process, so far, consuming 31 months.

g. Acrylonitrile

On June 29, 1977 (42 FR 33043), and July 5, 1977 (42.FR 34326), OSHA requested public comments concerning occupational exposure to vinyl cyanide or acrylonitrile. An emergency temporary standard regulating occupational exposures was published on January 17, 1978 (43 FR 2586), contested on January 17, 1978, the stay was denied in *Visturon* v. *OSHA* on March 28, 1978 in the Sixth Circuit, a permanent standard was proposed on January 17, 1978, (43 FR 45762), hearings held in March and April 1978 and the final standard issued on October 3, 1978 (43 FR 45762). That final standard was not judicially contested, although the entire process consumed 16 months even after the Manufacturing Chemists Association and Dow Chemical Co. on the one hand and E. I. du Pont de Nemours & Co. Inc. on the other hand informed OSHA that such substance was a potential carcinogen based on both animal and human evidence in March and May of 1977 respectively.

h. Beryllium

In the case of a standard regulating occupational exposures to beryllium, the proposed standard was published on October 17, 1975 (40 FR 4814). Hearings were held during August and September 1977. A final standard is pending with the process to date having consumed at least 51 months.

In sum, OSHA believes that the length of time consumed in official regulatory and judicial processes will be shortened after the promulgation of this Part for the following reasons: the periodic announcement of regulatory priorities and advance notice of identification and classification criteria will enable all participants in the regulatory process, including OSHA staff, to act with greater efficiency and certainty in framing the truly critical issues in any rulemaking and locating the required technical and scientific expertise early in the proceeding. This should shorten and sharpen the rulemakings. Also the reviewing courts will be presented with rulemaking records of improved coherence, relevance and reduced size, aiding their deliberations.

Other administrative problems faced by OSHA in promulgating regulations in this area on a case-by-case basis are expected to be mitigated by these regulations. OSHA had stated that the present system unreasonably takes the time of scientific experts who were asked to present statements concerning identical issues in various proceedings. For example, Dr. Rall (Director, NIEHS) testified:

". . . I think the discussion of the issues can and should continue forever.

Mr. Hanson (of Dow Chemical Co.) Which forum, sir?

• • • • •

Dr. Rall: In scientific forums. Sometimes the regulatory agency has to say—and I think it is perfectly proper—that we accept the current state of knowledge and regulate on the basis of it. The point really is that the

*The cancer-causing properties of asbestos were not used as a basis for the 1972 OSHA asbestos standard.

North American Refractories Company's Answers to Plaintiffs' Request for Production in Kanawha County (1995)
ACL Doc 21536 · Page 28 of 36
Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/28

Paul Rosmus
Training materials



A GUIDE TO THE

HAZARD COMMUNICATION STANDARD

Copyright 1984

By

THE REFRACTORIES INSTITUTI

301 Fifth Avenue, Suite 1517
Pittsburgh, PA 15222

(412) 281-6787

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/29

REFRACTORIES MANUFACTURING
COMMON CHEMICALS LIST

The following list of chemicals has been compiled by The Refractories Institute's Toxic Substances Committee from those sources* specified by the OSHA Hazard Communication Standard for establishing that chemicals are hazardous or carcinogenic. It is intended as a reference list of those substances commonly used in refractories manufacturing facilities that appear in those source materials and require an MSDS under the OSHA Standard.

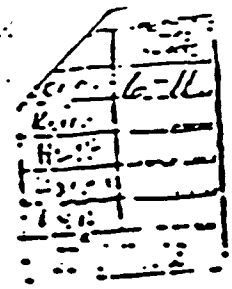
This list is not to be considered comprehensive or current.

CHEMICAL NAME	SOURCE* DOCUMENT			
	OSHA Z-Table	TLV List	IARC Carcinogen	NTP Carcinogen
Acetic acid	x	x		
Acetone	x	x		
Acetyisalicylic acid (Asprin)		x		
Alumina (alpha Alumina)		x		
Aluminum (Metal and oxides)	x	x		
Aluminum (soluble salts)		x		
Ammonia	x	x		
Asbestos		x	x	x
Asphalt (petroleum) fumes		x		
Benzene		x	x	x
Benzo (a) pyrene		x		x
Borates		x		
Borates, tetra, sodium salts--anhydrous		x		
Boron oxide	x	x		
Butane		x		
Calcium carbonate/ marble		x		
Calcium cyanamide		x		
Calcium hydroxide		x		
Calcium oxide	x	x		
Calcium silicate		x		
Carbofuran		x		
Carbon black	x	x		
Carbon monoxide	x	x		
Chromate		x		
Chromate as Cr, Chromite ore processing		x		x

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/30



Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/31



June 2, 1964

Mr. J. A. Stott
North American Refractories Company
National City East 6th Building
Cleveland 14, Ohio

Dear Joe:

At a recent meeting of the Board of Directors of the National Insulation Manufacturers Association, it was brought out that one of the major insulation manufacturers was planning to add a cautionary note to containers where the products involved included asbestos as a constituent.

I am attaching a copy of that portion of the minutes of this meeting which gives the details of this step.

We are planning to use this same cautionary note, having it printed on the bags when our present stocks run out. The Eagle-Picher products involved are: Super "66" Cement, One-Cote Cement, "33" Cement and "43" Cement. Their corresponding products are: Stay-On and Unicote.

At your convenience, would you let us know if you wish similar action taken with respect to the cements which we are manufacturing under your label.

Sincerely,

THE EAGLE-PICHER COMPANY

John P. Harrington
General Sales Manager
Industrial Insulation

JPH/sa

Att.

bcc: Mr. H. F. Munn
Mr. A. L. Jones

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/32

NORTH AMERICAN REFRACTORIES CO.

NATIONAL CITY-EAST 6TH BUILDING • CLEVELAND, OHIO 44114

June 10, 1964

The Eagle-Picher Company
Insulation Division
American Building
Cincinnati, Ohio 45201

Attention: Mr. John P. Harrington
General Sales Manager
Industrial Insulation

Dear Mr. Harrington:

We acknowledge and thank you for your letter dated June 2, informing us of the action taken at a recent meeting of the Board of Directors of the National Insulation Manufacturers Association, concerning adding a cautionary note to containers where products involved include asbestos as a constituent.

It is noted that your company is planning to use this same cautionary note, having it printed on the bags when your present stocks are depleted. Accordingly, the Management of our company is desirous of having this same cautionary note appear on our corresponding products; namely, STAT ON and UNICORE. So far as our products are concerned, this may be accomplished either by having the note printed on the bags or applied by the use of a sticker label.

It is with deep regret that we inform you of the death of Joseph A. Stott on April 30, 1964, after a two month illness.

Very truly yours

NORTH AMERICAN REFRACTORIES CO.

[illegible] A. Miller
Assistant to Sales Ma[illegible]

CAM:ld



Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/33

NORTH AMERICAN

June 16, 1964

[illegible]	
[illegible]	6-19
[illegible]	6-20
[illegible]	6/22
RETURN TO A. L. JONES	

J.P. Harrington
Cincinnati Office

Subject: No. American Refractories
"Caution" Labels

We note Mr. Miller's letter of June 10th in answer to your inquiry of June 2nd. We initialed approval of the new label printed on the bag or applied by the use of a sticker label. You are aware that the label idea will be a little expensive, up to half the cost of the bag, due mainly to the amount of time to affix the label.

For your information, our supply of printed Stanch Cement bags would last 9 months at the rate of usage in the first six months this year. On the Dolomite bag, we have 4,930 on hand and have had no usage during the first six months of this year. Actually, we have used only 700 bags in the last 12 years. We still have the original supply purchased in 1950. Maybe this product needs a little promotion to get it back into circulation.

We await your comments.

A.L. Jones

ALJ/ls

cc: W.F. McCarthy
H.F. Dunn
L.T. Montant

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/34

MAY 16 1951

Mr. Alton L. Jones
JOPLIN INSULATION PLANT

Dear Alton:

You have probably already seen the letter from Mr. Miller of North American Refractories Company to John Harrington asking that the Caution notice be applied to the products we make for Maroo. Lou Montant informs me that the product designations that you will want to be covered by this Caution notice are:

Maroo Star-On - ptd

Maroo Unicote - ptd

Will you please proceed accordingly, Alton?

Bill

WFMc/cs

W. F. McCarthy

cc-Mr. H. F. Munn
Mr. J. P. Harrington
Mr. L. T. Montant

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/35

IN THE CIRCUIT COURT OF KANAWHA COUNTY, WEST VIRGINIA

IN RE: ASBESTOS III CIVIL ACTION NO. 92-C-8888

CERTIFICATE OF SERVICE

I, Joseph S. Beeson, counsel for North American Refractories Company, do hereby certify that service of the attached **NORTH AMERICAN REFRACTORIES COMPANY'S ANSWERS TO PLAINTIFFS' REQUEST FOR PRODUCTION TO ALL PRODUCTS OR SUPPLIER DEFENDANTS** has been made upon plaintiffs' counsel of record by placing a true copy in the U.S. mail, postage prepaid this 12th day of April, 1995, addressed as follows:

Theodore Goldberg, Esquire
Goldberg, Persky, Jennings & White, P.C.
1030 Fifth Avenue, Third Floor
Pittsburgh, Pennsylvania 15219
and
Scott S. Segal, Esquire
Segal and Davis, L.C.
810 Kanawha Boulevard, East
Charleston, West Virginia 25301
Counsel for Plaintiffs

Joseph S. Beeson

Published by AsbestosClaims.Law
asbestosclaims.law/library/21536/36