

① JCC
② JCC
F/L

UNION CARBIDE CORPORATION
SILICONES & URETHANE INTERMEDIATES
ENGINEERING
SOUTH CHARLESTON, WEST VIRGINIA

MEMORANDUM

April 17, 1985

TO: J. F. Dodd (Engineering Manager)
C. E. Fry (514 Health & Safety)
P. D. Gossage (Maintenance Dept. Head)
J. G. Roy (Energy Systems Rep.)
T. G. Swanson (Energy Systems Dept. Head)
P. G. West (Maintenance Dept. Rep.)
J. L. Worstell (514 Environmental Protection)

COPY: W. E. Ballard
R. G. Harmon
R. E. McElowney
P. B. Smith
A. B. Williamson

FROM: I. L. Beckett

SUBJECT: Project Scope Document
Safety/Health Insulation, No. 2 Powerhouse, Building 151

The following project scope has been prepared for acceptance by the above listed persons representing their department or group as noted. These approval signatures are required prior to Work Order Request submission.

PROJECT SCOPE

The objective of this project is to minimize hazards of airborne asbestos in the No. 2 Powerhouse.

DESCRIPTION

Much of the insulation in the No. 2 Powerhouse is asbestos and is in poor condition. Uncovered, unprotected asbestos insulation constitutes a health hazard to employees. This project will provide for the removal of asbestos insulation from idle facilities, replace damaged insulation with an approved type, or seal with metal cover, all remaining asbestos insulation. This will minimize personnel exposure to airborne asbestos which will result in a healthier working environment.

BREAKDOWN OF WORK

The work required for this project is divided into Capital and Removal. The following is a description of items to complete this project.

Capital

- Replace existing damaged asbestos insulation with an approved type in accordance with applicable UCC Insulation Standards.
- All piping which is not presently covered with metal jacketing will be jacketed with .016" thick, smooth aluminum with moisture barrier. Jacketing will be banded in place with 1/2" stainless steel bands on 12" centers. All 90 degree and 45 degree elbows will be covered with preformed aluminum covers.
- Existing ductwork and equipment will be covered with .040" thick stucco embossed box rib aluminum lagging. The lagging will be attached to a subgirt system consisting of 18 gauge aluminized steel channel and 5/16" diameter self-welding studs with drive-on hat attachments. The studs will be welded to the duct stiffeners through holes cut in the insulation.

Removals

- Asbestos insulation will be removed completely from all idle equipment and piping.

SAFETY CONSIDERATIONS

When the asbestos insulation is being removed or replaced, Safety and Health guidelines will be followed such as: installing rope barricades and clearing the area of plant personnel, posting of warning signs, assuring that proper bagging and disposal of insulation is adhered to, and monitoring of surrounding work areas.

Since this work will be performed by Contractors, the following are additional guidelines which contract personnel must adhere to: if practicable, wet down the asbestos insulation before removal, wearing of appropriate respirators, wearing and disposal of proper protective clothing.

ENVIRONMENTAL CONSIDERATIONS

All OSHA and EPA regulations will be complied with. The Plant 514 Environmental Protection Department will be given ample lead time so that proper notification can be filed with the U.S. Environmental Protection Agency that removal of asbestos insulation will occur.

ENGINEERING

Engineering for this project will be performed by UI Design Engineering at South Charleston.

PERFORMANCE OF WORK

All asbestos insulation replacement, repairs, sealing, and removal work will be performed by Contractor(s).

LOCATION

This work will occur at the No. 2 Powerhouse. If approved funds are available after work is completed at this site, additional work will be done in the Water Treatment and Utility Distribution Departments.

SCHEDULE

The first phase of this project will cover the insulation work on the #16 and #15 boilers respectively. The #16 boiler is scheduled for shutdown from May 25, 1985 through June 8, 1985; therefore, insulation work will begin on this boiler first. The overall mechanical completion of the project is scheduled for December 31, 1985.



I. L. Beckett

ILB/bsh
08691

SAFETY/HEALTH INSULATION, NO. 2 POWERHOUSE, BUILDING 151

APPROVAL SIGNATURES:



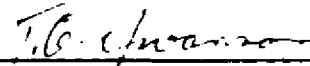
I. L. Beckett (Project Manager)



J. F. Dodd (Engineering Manager)



P. D. Gossage (Maint. Dept. Head)



T. G. Swanson (Energy Sys. Dept. Head)



P. G. West (Maint. Dept. Rep.)



J. G. Roy (Energy Systems Rep.)



C. E. Fry (514 Health & Safety)



J. V. Worstell (514 Environmental Prot.)

ILB/bsh
08691



INTERNAL
CORRESPONDENCE

UNION CARBIDE CORPORATION SOUTH CHARLESTON PLANT
Silicones and Urethane Intermediates P.O. BOX 8004, SOUTH CHARLESTON, WV 25303

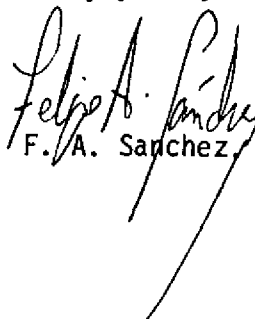
To (Name)	R. E. Peele	Date	May 30, 1984
Division	W. S. Walker	Originating Dept.	ENVIRONMENTAL PROTECTION
Location		Area	
Area		Subject	Asbestos Standards Applicable at 514 Plant
Copy to	G. W. Bott P. D. Gossage B. P. Johnson, Jr. J. R. Soice J. L. Worstell EPD Staff (Circulate)		

The attached summarizes the NESHAP Standards for asbestos which apply to operations at Location 514. This summary is being sent to you as primary contacts in order that you might pass the information on to the specific individuals that will ensure compliance with these standards. Normally, only maintenance and construction activities will be involved in the handling of asbestos.

I would like to request a copy of any written procedures or if you should know of someone who has written procedures for the handling of asbestos, please forward this information to me by June 30, 1984.

If you have any further questions or comments, please feel free to call me at X-2799.

Truly yours,


F. A. Sanchez

FASs/rls
0033A

Attachment

NESHAP STANDARDS FOR ASBESTOS APPLICABLE AT 514

Title 40 of the Code of Federal Regulations, Part 61, Subpart M specifies the standards for handling and disposing of asbestos. Asbestos is considered a hazardous air pollutant due to its adverse health effects. Exposure to asbestos can cause fibrosis in the lungs leading to more serious illness like lung cancer.

- I. DEFINITION: Asbestos means the asbestiform varieties of serpentinite, riebeckite, cummingtonite-grunerite, anthophyllite, and actinolite-tremolite. As used here, the word asbestos includes asbestos, asbestos containing material, asbestos containing waste, and friable asbestos (i.e. can be pulverized)

II. STANDARDS APPLICABLE AT 514

- A. Roadways: No owner or operator of a roadway may deposit asbestos on that roadway.
- B. Demolition and Renovation:
1. Notification: The following information must be reported to the EPA Administrator:
- a) Name and address of the owner or operator
 - b) Description of facility being demolished or renovated including size, age, and prior use.
 - c) Estimate of the amount of asbestos removed.
 - d) Location of the facility
 - e) Schedule of demolition activity
 - f) Nature and methods to be used
 - g) Procedures to be used to comply with these regulations
 - h) Name and location of the waste disposal facility used for the asbestos.

The report should be made in one of the following manners:

- a) At least 10 days before demolition when the amount of asbestos is at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other equipment.
- b) At least 20 days before demolition when the amount of asbestos is less than 80 linear meter (260 linear feet) on pipes or at least 15 square meter (160 square feet) on other equipment.
- c) As early as possible before demolition when such demolition is ordered by a state or local agency due to danger of immediate collapse or unsoundness.

At 514 Notifications will be made by EPD.

2. Emissions Control:

- a) Asbestos must be removed before demolition begins unless:
 - i) It is encased in concrete or similar material
 - ii) It is adequately wetted whenever exposed
- b) When a component with asbestos is taken out in sections:
 - i) Adequately wet any asbestos exposed during disjoining operations
 - ii) Carefully lower the sections to the ground, not dropping or throwing them.
- c) Adequately wet all asbestos before being stripped from the facility components unless:
 - i) A request has been made to EPA not to wet the asbestos due to unavoidable equipment damage; and
 - ii) EPA has approved the use of a ventilation and collection system that will prevent any emission.
- d) After a component with asbestos has been taken out:
 - i) Adequately wet asbestos before stripping; or
 - ii) Use a ventilation, collection system that will prevent any particulated asbestos emissions.
- e) For asbestos that has been removed or stripped:
 - i) Adequately wet and keep wet until disposed.
 - ii) Carefully lower to the ground not dropping or throwing it.
 - iii) Transport via dust-tight chutes or containers when removed or stripped over 50 feet above ground.
- f) When the temperature is below 0 degrees C. (32 degrees F.):
 - i) Remove components covered with asbestos as sections as much as possible.
 - ii) Adequately wet asbestos before stripping and keep wet after removed until disposed.
- g) If the facility is being demolished because of an agency order:
 - i) Wet the portions covered with asbestos during the demolition.

C. Insulating Materials:

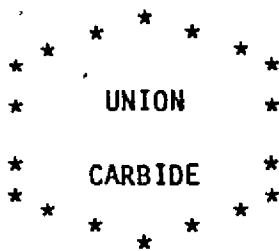
No owner or operator may install or reinstall any insulating materials that contain commercial asbestos if the materials are either molded or wet-applied.

D. Disposal:

1. No visible emissions are allowed while collecting, packaging, transporting, and disposing asbestos:
 - a) Treat asbestos with water:
 - i) Mix asbestos from emissions control devices with water to form a slurry and adequately wet all other asbestos wastes.
 - ii) No emissions must be discharged from collection, mixing and wetting operations
 - iii) After wetting, seal all asbestos in leak-tight containers while wet.
 - iv) Label all containers as follows:
"CAUTION CONTAINS ASBESTOS
Avoid Opening or Breaking Container
Breathing Asbestos Is Hazardous
To Your Health",
or use the warning signs specified by OSHA.
 - b) Process all asbestos waste so it can't be pulverized.
 - i) Form into pellets or other shapes
 - ii) Discharge no emissions while doing so
 - c) After all the asbestos waste has been packaged;
 - i) Complete a waste manifest and get EPD approval
 - ii) Dispose of the waste at Goff Mountain Landfill

F. A. Sanchez
5/22/84

FAS/r1s
0033A



John
will have to
check ourselves out
on this TCS
INTERNAL CORRESPONDENCE

CC - G-11
TGS
W. Williams
J.R. Dean

SILICONES & URETHANE INTERMEDIATES

Bldg. 3005 - 2
South Charleston, WV 25303

TO: Mr. John Buzzard
FROM: Mr. D. A. Gosselin
CC: Mr. C. E. Fry
Mr. R. L. Foster
Dr. D. Liebeskind
Mr. C. A. McNeill
DATE: May 31, 1984
ORIG. DEPT: S&UI Safety and Health
SUBJECT: Laundrying Asbestos
Contaminated Clothing

Dear John:

I have reviewed your letter (Attachment "A") concerning the laundrying of asbestos contaminated clothing vis-a-vis the OSHA Standard 1910.1001 and have determined that while your approach is sound and appropriate, there appears to be one additional thing that must be done.

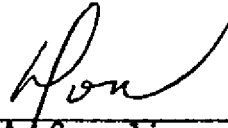
Paragraph (d)(4)(iii)(b) of Section 1910.1001 (see boxed-in area on Attachment "B") states that "Any employer who gives asbestos-contaminated clothing to another person for laundrying shall inform such person of the requirement in paragraph (d)(4)(iii)(a) of this section to effectively prevent the release of airborne asbestos fibers in excess of the exposure."

I suggest that a letter be written to Mr. Fauss, the owner of Vogue-Swift Cleaners, calling his attention to this paragraph in Section 1910.1001 of the code of Federal Regulations.

For your general information, a temporary emergency standard (issued 11/4/83) of 0.5 fibers (longer than 5 micrometers) per cubic centimeter as on eight-hour time weighted standard is currently in effect. It could soon get tighter. In a proposed rule and notice of hearing published in the Federal Register on 4/10/84, OSHA announced its intent to permanently lower the eight-hour time-weighted average down to one of two alternative levels: 0.5 fibers/cc or 0.2 fibers/cc. OSHA seems to be leaning towards the 0.2 fibers/cc limit, but had invited comments on the proposed revisions to be submitted on or before 5/12/84. The informal rulemaking hearing is scheduled for 6/19/84 in Washington, D.C.

Mr. John Buzzard
May 31, 1984
Page 2

Thank you for your inquiry. I think you asked a worthwhile question.



D. A. Gosselin
Safety and Health Affairs Manager

DAG/ero

Attachments

0386A

(b) See § 1910.6 concerning the availability of ANSI Z82-1971, and the maintenance of a historic file in conformance therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) *Particular tools.* All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) *Work practices—(i) Wet methods.* Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) *Particular products and operations.* No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or vented so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) *Spraying, demolition, or removal.* Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d)(2)(iii) of this section and with special clothing in accordance with paragraph (d)(3) of this section.

(d) *Personal protective equipment—(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:*

(i) During the time period necessary to install the engineering controls and to institute the work practices re-

quired by paragraph (c) of this section;

(ii) In work situations in which the methods prescribed in paragraph (b) of this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by paragraphs (d)(1) (i), (ii), or (iii) of this section, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by paragraph (d)(1) of this section, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) *Air purifying respirators.* A reusable or single use air purifying respirator, or a respirator described in paragraphs (d)(2) (i) or (iii) of this section, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) *Powered air purifying respirators.* A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in paragraph (d)(2)(iii) of this section, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) *Type "C" supplied-air respirators,* continuous flow or pressure

demand class. A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) *Establishment of a respirator program.* (a) The employer shall establish a respirator program in accordance with the requirements of the American National Standards Practices for Respiratory Protection, ANSI Z82.2-1969, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z82.2-1969 and the maintenance of a historic file in conformance therewith. The address of the American National Standards Institute is given in § 1910.100.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position whose duties he is able to perform with the same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

(3) *Special clothing.* The employer shall provide, and require the use of, special clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in paragraph (b) of this section.

(4) *Change rooms:* (i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide

change rooms for employees working regularly at the place.

(ii) *Clothes lockers.* The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes.

(iii) *Laundry:* (a) *Laundry of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.*

(b) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in paragraph (d)(4)(iii)(a) of this section to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(c) Contaminated clothing shall be transported in sealed impermeable bags or other closed, impermeable containers, and labeled in accordance with paragraph (e) of this section.

Method of measurement. All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 400-450 x (magnification) (4 millimeter objective) with phase contrast illumination.

(f) *Monitoring—(1) Initial determination.* Within 6 months of the publication of this section, every employer shall cause every place of employment where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section.

(2) *Personal monitoring—(i) Samples shall be collected from within the breathing zone of the employees, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.*



INTERNAL
CORRESPONDENCE

Attachment A

RECEIVED

MAY 22 1984

D. A. GOSSELIN

UNION CARBIDE CORPORATION SILICONES PLANT

SILICONES AND URETHANE INTERMEDIATES

P.O. BOX 1830, BRISTOLVILLE, WV 26117

To (Name) Mr. D. A. Gosselin
Division Union Carbide Corporation
Location Post Office Box 8361
Area Building 3005
South Charleston, West Virginia 25303

Date May 21, 1984

Department Purchasing

Attn:

Copy to

Subject

Cleaning of Insulators Clothing

Dear Don:

Confirming our recent phone conversation regarding the cleaning of insulators clothing at Vogue-Swift Cleaners in Marietta, Ohio, the following is a brief outline of the procedure used:

(1) Purchase order issued describing clothing as contaminated.
Copy attached.

(2) Clothing is put into special heavy black polyethylene bags imprinted with statement as follows:

- CAUTION -	(2-3/8" Letters)
CONTAINS ASBESTOS FIBERS	(1-5/8" Letters)
AVOID CREATING DUST	(1-5/8" Letters)
BREATHING ASBESTOS DUST MAY	(1-5/8" Letters)
CAUSE SERIOUS BODILY HARM	(1-5/8" Letters)

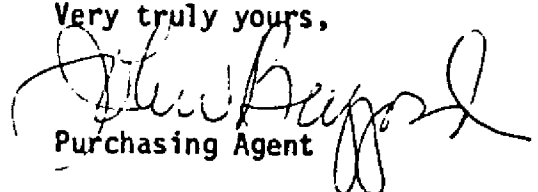
(3) We have talked to Mr. Mahlon Fauss, the Owner of Vogue-Swift Cleaners, by phone, and advised him how we are labeling the bags. Mr. Fauss agreed to inform his employees. Nothing has been sent to Vogue-Swift in writing regarding how to handle clothing.

(4) Each time we send a bag of clothing a Special Shipping Order is prepared. Our truck delivers bag to cleaner and our truck picks up cleaned clothing. Estimate clothing is sent out for cleaning 2 to 3 days weekly.

Please advise if we are meeting all OSHA requirements and any further obligations we might have to the vendor rendering this service.

Thanks for your help.

Very truly yours,


Purchasing Agent

J. R. Buzzard:lk

Attachments

UCC 003112

WINTERIZATION PREPARATION 1985

- o NOW IS THE TIME TO BEGIN PREPARATION.
- o CHECK TRACER SYSTEMS FOR LEAKS AND BAD TRAPS.
 - (1) PROVIDE LISTS OF DEFICIENCIES AND SHOP ORDERS TO AREA SUPERINTENDENTS.
 - (2) AREA SUPERINTENDENTS WILL SCHEDULE AND COMPLETE TRACING DEFICIENCIES BY JULY 1.
- o SURVEY INSULATION FOR DEFICIENCIES.
 - (1) PROVIDE LISTS OF DEFICIENCIES AND SHOP ORDERS TO AREA SUPERINTENDENTS.
 - (2) EACH MAINTENANCE ZONE SUPERVISOR WILL BE RESPONSIBLE TO MAINTAIN THIS LIST - UPDATING THE STATUS OF COMPLETIONS AND ADDING TO THE LIST ANY INSULATION THAT IS REMOVED FOR MECHANICAL REPAIRS.
 - (3) AREA SUPERINTENDENTS WILL BE RESPONSIBLE FOR SCHEDULING THE LISTED REQUIREMENTS FOR COMPLETION BY NOVEMBER 1.
- o BEGINNING NOW WILL ENABLE US TO:
 - (1) COMPLETE NECESSARY WORK PRIOR TO WINTER.
 - (2) SPREAD THE COSTS OF WINTERIZATION WORK THROUGHOUT THE SUMMER MONTHS.
 - (3) COMPLETE AS MUCH OF THE WORK AS POSSIBLE ON STRAIGHT TIME.
 - (4) TAKE ADVANTAGE OF MORE DAYLIGHT HOURS WHERE OVERTIME IS REQUIRED.
 - (5) HAVE WORK PLANNED SO THAT BETTER UTILIZATION OF "SWAP" PEOPLE CAN BE REALIZED.
 - (6) KEEP YOU UPDATED ON THE STATUS OF WINTERIZATION REQUIREMENTS.



UNION CARBIDE CORPORATION

P. O. BOX 8004, SOUTH CHARLESTON, W. VA. 25303

Silicones and Urethane Intermediates

South Charleston Plant

To: Mr. J. F. Dodd

Copy to: Mr. W. E. Ballard
Mr. I. L. Beckett
Mr. L. T. Brannon
Mr. J. R. Dean
Mr. G. F. Painter
Mr. E. C. Powell
Mr. T. G. Swanson
Mr. W. L. Thomas
Mr. P. G. West

From: J. G. Roy

Date: March 27, 1985

Subject: Plant Project to Eliminate Asbestos Exposure

On February 21st W. L. Thomas called a meeting to kick off the first phase of a project to eliminate asbestos exposure in the plant. The minutes of that meeting issued by Ira Beckett reflect the general agreement reached on how the project should proceed. A time table was also established in the above meeting indicating that a rough draft of the WOR would be ready for review by February 27th with submittal to Danbury in sufficient time to obtain a May 1 approval.

Inasmuch as the No. 2 Steam Plant was to be starting point I was requested to work with Paul West and develop a strategy. To this end a meeting was held with a local insulating contractor that included Operations, Maint., and Engineering representation. It was agreed that a modified version of my asbestos elimination plan would serve as a beginning point for specific project definition. It was my understanding that this activity was to provide specific bid packages which would enable the plant to implement the project upon approval. There was no decision or agreements that contractor input was to serve as the basis for WOR preparation.

After reviewing and walking through the Energy Systems plan, the contractor began a more detailed study of the situation. We agreed that removal of insulation on idle facilities would provide the biggest return on our overall objective and that this should be done early in the project execution. Next with the contractor's input a manageable piece of work with finite boundaries was established together with the repair methodology.

Through discussions with the contractor and Engineering the section of the steam plant from the north side of No. 15 Boiler to the south wall of Building 151 was selected as the first increment of the repairs. This selection was made because much of the work on the boilers can only be done during shut-down. Boilers 15 and 16 come down at the end of May with back-to-back outages extending to the end of June. We planned to work the insulation contractors on off-shift hours to minimize congestion around the boilers during turnaround. This piece of work is the only one that will need tight scheduling to get the work done.

Under the February 21st agreements this did not present a problem. Inasmuch as fixed price contracting was the way elected to proceed and the overall plant project will far exceed the funds to be requested in 1985, our contract preparation activities can move parallel to the WOR approval procedure. However, I understand that there has been a shift in direction which was not communicated to Energy Systems. Ira Beckett has informed me that current plans do not include the use of maintenance estimates for the WOR preparation. Rather, the contractor currently estimating the work will be requested to proceed to other sections of the steam plant and beyond as necessary until the desired 1985 level of spending is identified. A ten percent estimate going into the WOR phase make sense for a conventional project. A conventional project is normally geared to job completion rather than the spending of a limited amount that will knowingly not achieve the total results. The ten percent estimate also serves as an audit tool in conventional projects for cost control purposes.

The asbestos project is anything but conventional. Since the monies involved in the WOR request will not even reach the halfway mark of that identified in the maintenance estimate, there is no risk in over-committing funds for this phase. The alternative to this project is do nothing or the limited amount that can be completed with maintenance forces. With health and safety at issue I doubt that such an alternative would be acceptable to plant and divisional management. On the issue of cost control, there is absolutely no risk in the agreed to competitive bid approach. A series of fixed price competitively bid contracts will insure that the specified work is completed in a cost effective manner. Incremental completions towards the overall project will provide a much higher degree of accuracy in later funding requests.

In view of the above I recommend that we return to the original strategy and use the maintenance estimate for the WOR. This will allow us to develop competitive bids for the removal of asbestos from idle facilities and first increment of repair work. Ira passed on the verbal cost numbers he received for the segments currently under consideration. Frankly, I believe that we are going to find them to be on the high side when all the bids are tallied. Use of these numbers could lead us to a project scope which is less than the plant currently has in mind.



J. G. Roy

JGR:kab

UCC 003115



INTERNAL
CORRESPONDENCE

UNION CARBIDE CORPORATION P.O. BOX 8361, SOUTH CHARLESTON, WV 25303
INVESTMENT RECOVERY DEPARTMENT

To (Name) Mr. L. Pierce, Jr.
Division Controller
Location Silicones and Urethane Inter.
Area Danbury K1454

Date March 11, 1985

Originating Dept

Area

Copy to Mr. W. E. Ballard
✓ Mr. J. C. Cogar
Mr. R. L. Foster
Mr. R. G. Link
Mr. T. G. Swanson
Mr. K. C. Watkins
Mr. W. R. Yerkey

Subject Surplus Property Declaration
Asbestos Removal -
No. 1 Steam Plant

Dear Leonard:

The enclosed Surplus Property Declaration is the first of a series of three for the dismantling and removal of the old Number 1 Steam Plant located within the South Charleston Plant.

This Surplus Property Declaration is for the first phase, removal of all asbestos and other insulation from the equipment and piping. Since the steam plant has been shut down for some time, the insulation has deteriorated and requires immediate attention.

The estimated cost is \$147M, and the work will be performed by an outside contractor specializing in asbestos removal. It is our intent to begin the work by no later than April 1, 1985, after proper notification of the Environmental Protection Agency by the plant. We therefore would appreciate approval from the division as soon as possible.

Very truly yours,


James E. Knap

WRY/JEK/pk/6813C
Enclosure



SURPLUS PROPERTY DECLARATION

LOCATION: 57 514
(UNIT CODE) (LOC. NO.)

Silicone & Urethane Intermediates

(DIVISION NAME)

South Charleston West Virginia

(CITY)

(STATE)

TO BE COMPLETED AT ORIGINATING LOCATION

Facility: No. 1 Steam Plant
Building Number 47-56-78 Dept./Sys. 043100
Owning Division SUI Profit Center 001
Date Available 1st Quarter 1985
Gross Fixed Investment 31,818.00
Net Book Value -0- as of 1/84
(Date)

Estimated Location Costs:

Shutdown and cleaning; preparation for removal
(Show procedures on the back)

Engineering -0-

Labor 10,000 includes fire watch

Material 15,000 include asbestos disposal

Overhead -0-

Total 25,000

Est. By J. G. Roy

GENERAL DESCRIPTION OF FACILITY: (Attach additional sheet if needed)

Removal of insulation (asbestos) from Mainland Powerhouse facility, buildings 47, 56 and 78 only. No mechanical equipment to be removed at this time.

REASON FOR SHUTDOWN: Steam plant idled in 1982 with no foreseeable need to operate.

HAZARDOUS MATERIALS PRODUCED OR HANDLED

(List by Name)

Estimated 6200 ft.³ asbestos insulation.

ESTIMATED BY INVESTMENT RECOVERY DEPARTMENT:

Value of Associated Stores _____
(e.g., 701, 703, 704, 720, 723, 740)

(See back of form)

Equipment Reuse (NBV) - 0 -
Equipment Income - 0 -
Other Income - 0 -
Dismantlement Proceeds - 0 -
Total Recovery - 0 -

Decontamination Cost \$147M
Dismantlement Cost - 0 -
Invest. Recovery Dept. 3M
Total Costs \$150M

By WRY Date 3/11/85

ROUTE FOR APPROVAL AS SHOWN BELOW:

	DATE	APPROVALS
1. Originator	3/11/85	T. G. Roy
2. Plant Surplus Equipment Coordinator	3/11/85	L. T. Brannon
3. Plant Manager	3/11/85	R. G. Link
4. Investment Recovery Dept. P.O. Box 8361 So. Charleston, WV 25303	3/11/85	James E. Knip

DISTRIBUTION:

5. Div. Controller obtains Div. and other approvals:

6. Investment Recovery Dept. distributes copies to originating plant and others as needed.

UNION CARBIDE CORPORATION
SILICONES & URETHANE INTERMEDIATES
ENGINEERING
SOUTH CHARLESTON, WEST VIRGINIA

MEMORANDUM

February 25, 1985

TO: W. E. Ballard J. G. Roy
J. A. Bowyer T. G. Swanson
J. R. Dean W. L. Thomas
C. R. Gillsepie P. G. West

COPY: J. F. Dodd
R. G. Harmon
A. B. Williamson

FROM: I. L. Beckett

SUBJECT: Minutes of Meeting - Asbestos Insulation Replacement Project, Phase I

A meeting was held on February 21, 1985 to discuss the subject project. The purpose of the meeting was to accomplish the following:

- Develop a scope that meets the \$900M cash flow objectives for 1985.
- Determine who will perform the work.
- Develop an action plan for WOR submittal by March 31, 1985.

The opening discussion was led by Mr. Ballard and centered around the magnitude of the project and the limits as to the amount of funds to be expended in 1985. It was determined that the Maintenance Department would be the sponsor for this project.

The following are discussions of each item listed in Mr. Thomas' suggested agenda.

SCOPE

A presentation by Mr. Dean showed the approximate hours required for repairs/replacement of asbestos insulation in each department at the South Charleston Plant. These figures were developed from a site survey conducted by Mr. W. B. Spurlock and Mr. T. G. West, Maintenance personnel. It was decided that asbestos repairs/replacement would be started first in the SUI Division. The following six departments were chosen since it was felt that

W. E. Ballard, et al.
Page Two
February 25, 1985

their combined total costs would more closely fall within the \$900M limit set for 1985: Water Treating, No. 2 Steam Plant, Utility Distribution, Polyols, Specialty Catalyst, and Maintenance.

PERFORMANCE OF WORK

It was determined that the majority of this work should be done by contractors since the Maintenance and Construction departments would not have adequate manpower to complete the project on time. Maintenance or Construction could, however, do selected parts of the project. It was pointed out by Mr. Roy that some contractors could be used for estimating portions of the project prior to WOR approval.

It was pointed out by Mr. Dean and Mr. Roy that asbestos insulation is not easily identified. There are some personnel within the plant that can identify this type of insulation, however, would not be available to go into each department to mark each line or piece of equipment requiring repairs/replacement. It was suggested by Mr. Ballard that Mr. Paul West would develop expertise in this area and would work with one appointed representative from each department to make these identifications. Each item must be identified in order to obtain contractor bids.

WORK ORDER REQUEST

A rough draft of the Work Order Request will be available for review by February 27, 1985. Four weeks will be allowed for local approval, while approval by Danbury is expected by May 1, 1985.



I. L. Beckett

ILB/bsh

07511

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UNION

CARBIDE

ENVIRONMENTAL PROTECTION - SOUTH CHARLESTON PLANT

February 28, 1984

TO : J. R. Dean
P. D. Gossage
A. B. Williamson

CC : R. L. Foster
S. Rossi
EPD Circulate

SUBJECT: Asbestos Capital Project

Felipe Sanchez will be the EPD rep for the proposed capital project for asbestos removal.

Jack

J. L. Worstell

JLW:cp
0191W

[illegible]

ESTIMATE FOR ASBESTOS REQUIREMENTS

DEPARTMENT	ASBESTOS REPAIR REQUIREMENTS	ASBESTOS MAINTENANCE PER YEAR			ASBESTOS REMOVAL		
		Hrs. Req.	Hrs Req.	Mat'l \$	Hrs Req.	Hrs Req.	Mat'l \$
Water Treating	525	160	8	960	7,200	720	64,800
Steam Plant	9,900	640	32	3,840	21,600	3,240	194,400
Utility Dist.	1,000	640	32	3,840	90,000	9,000	810,000
Mixing	380	160	8	960	3,600	360	32,400
Upper Island	5,400	320	16	1,920	16,200	1,620	145,800
Mainland	1,350	160	8	960	5,400	540	48,600
PVA Resins	750	80	4	480	3,600	360	32,400
Solution Vinyls	3,600	560	28	3,360	14,400	1,440	129,600
Silicones II	0	0	-	-	0	0	0
Polyols	750	80	4	480	7,200	720	64,800
Specialty Cat.	5,400	320	16	1,920	10,800	1,080	97,200
Middle Island	1,900	160	8	960	10,800	1,080	97,200
Oxide Adducts	1,200	160	8	960	7,200	720	64,800
Distribution	1,800	240	12	1,440	7,200	720	64,800
Bulk Terminal	900	160	8	960	5,400	540	48,600
Maintenance	450	80	4	480	3,600	360	32,400
TOTAL PLANT	36,305	4,480	224	26,880	239,400	25,020	2,154,600

UCC 003124

ASBESTOS REPAIR PLAN -- 1985

- o CAPITAL PROJECT
- o IRA BECKETT - PROJECT MANAGER
- o PAUL WEST - DEPARTMENT CONTACT
JERRY ROY
- o ENERGY SYSTEMS
POLYOLS
SPECIALTY CATALYST

ESTIMATE
FOR
ASBESTOS REQUIREMENTS

1-11-85

Department		Asbestos Maintenance PER YEAR				Asbestos Removal And/or Replacement			
NAME	NUMBER	IR Hrs REQ	Support Hrs REQ	MAT'L \$	DAYS	IR Hrs REQ	Support Hrs REQ	MAT'L \$	Basls
Water Treating	003	160	8	\$ 960	Est	7200	720	\$ 64800	Est
Storm Plant	004	640	32	\$ 3840	Est	21600	3240	\$ 194400	Est
Utility Dist	007	640	32	\$ 3840	Est	90000	9000	\$ 810000	Est
Mixing	049	160	8	\$ 960	Est	3600	360	\$ 32400	Est
Upper Island	064	320	16	\$ 1920	Est	16200	1620	\$ 145800	Est
Mainland	077	160	8	\$ 960	Est	5400	540	\$ 48600	Est
PHA Resins	082	80	4	\$ 480	Est	3600	360	\$ 32400	Est
Solutions/King	083	560	28	\$ 3360	Est	14400	1440	\$ 129600	Est
Silicone II	103	0	—	—	Est	0	0	0	0
Polyols	106	80	4	\$ 480	Est	7200	720	\$ 64800	Est
Spec Cat	113	560	28	\$ 3360	Est	21600	2160	\$ 194400	Est
Spec Chem	115	320	16	\$ 1920	Est	10800	1080	\$ 97200	Est
Waste Island	121	160	8	\$ 960	Est	10800	1080	\$ 97200	Est
Oxide Admix	169	160	8	\$ 960	Est	7200	720	\$ 64800	Est
Distribution	222/227	240	12	\$ 1440	Est	7200	720	\$ 64800	Est
Bulk Tankage	228/229	160	8	\$ 960	Est	5400	540	\$ 48600	Est
Maintenance	326	80	4	\$ 480	Est	3600	360	\$ 32400	Est
MISC	—	—	—	—	—	3600	360	\$ 32400	Est
Total	PLANT	4480	224	\$ 26880	Est	239400	25020	\$ 2154600	Est
		117,600				5,985,000 625500			
		\$ 114,400				6,610,500			
						8,760,100			

NORTH CAROLINA STATE ARCHIVES

NAME		DATE		PLACE	
1	1860	1	1860	1	1860
2	1861	2	1861	2	1861
3	1862	3	1862	3	1862
4	1863	4	1863	4	1863
5	1864	5	1864	5	1864
6	1865	6	1865	6	1865
7	1866	7	1866	7	1866
8	1867	8	1867	8	1867
9	1868	9	1868	9	1868
10	1869	10	1869	10	1869
11	1870	11	1870	11	1870
12	1871	12	1871	12	1871
13	1872	13	1872	13	1872
14	1873	14	1873	14	1873
15	1874	15	1874	15	1874
16	1875	16	1875	16	1875
17	1876	17	1876	17	1876
18	1877	18	1877	18	1877
19	1878	19	1878	19	1878
20	1879	20	1879	20	1879
21	1880	21	1880	21	1880
22	1881	22	1881	22	1881
23	1882	23	1882	23	1882
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28	1887	28	1887	28	1887
29	1888	29	1888	29	1888
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31	1890	31	1890	31	1890
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33	1892	33	1892	33	1892
34	1893	34	1893	34	1893
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37	1896	37	1896	37	1896
38	1897	38	1897	38	1897
39	1898	39	1898	39	1898
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41	1900	41	1900	41	1900
42	1901	42	1901	42	1901
43	1902	43	1902	43	1902
44	1903	44	1903	44	1903
45	1904	45	1904	45	1904
46	1905	46	1905	46	1905
47	1906	47	1906	47	1906
48	1907	48	1907	48	1907
49	1908	49	1908	49	1908
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51	1910	51	1910	51	1910
52	1911	52	1911	52	1911
53	1912	53	1912	53	1912
54	1913	54	1913	54	1913
55	1914	55	1914	55	1914
56	1915	56	1915	56	1915
57	1916	57	1916	57	1916
58	1917	58	1917	58	1917
59	1918	59	1918	59	1918
60	1919	60	1919	60	1919
61	1920	61	1920	61	1920
62	1921	62	1921	62	1921
63	1922	63	1922	63	1922
64	1923	64	1923	64	1923
65	1924	65	1924	65	1924
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67	1926	67	1926	67	1926
68	1927	68	1927	68	1927
69	1928	69	1928	69	1928
70	1929	70	1929	70	1929
71	1930	71	1930	71	1930
72	1931	72	1931	72	1931
73	1932	73	1932	73	1932
74	1933	74	1933	74	1933
75	1934	75	1934	75	1934
76	1935	76	1935	76	1935
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84	1943	84	1943	84	1943
85	1944	85	1944	85	1944
86	1945	86	1945	86	1945
87	1946	87	1946	87	1946
88	1947	88	1947	88	1947
89	1948	89	1948	89	1948
90	1949	90	1949	90	1949
91	1950	91	1950	91	1950
92	1951	92	1951	92	1951
93	1952	93	1952	93	1952
94	1953	94	1953	94	1953
95	1954	95	1954	95	1954
96	1955	96	1955	96	1955
97	1956	97	1956	97	1956
98	1957	98	1957	98	1957
99	1958	99	1958	99	1958
100	1959	100	1959	100	1959

UNION CARBIDE CORPORATION
SILICONES AND URETHANE INTERMEDIATES
Engineering
South Charleston, West Virginia

MEMORANDUM

February 11, 1985

TO: W. E. Ballard
J. A. Bowyer
~~W. L. Thomas~~
C. R. Gillespie
J. G. Roy
T. G. Swanson
P. G. West

COPY TO: J. F. Dodd

FROM: W. L. Thomas

SUBJECT: Asbestos Insulation Replacement Project - Phase I

Please attend a meeting on Thursday, February 21, 1985 in Building 82-320 at 1:30 p.m. to plan this project. It is proposed that discussions center around the following:

- Select a scope that satisfies the \$900M cash flow objective for 1985.
- Ascertain who does what work.
- Develop an action plan for WOR submittal by March 31, 1985.

Attached for your advance reading is a proposal by Jerry Roy.

W. L. Thomas

W. L. Thomas

WLT:jjv

Attachment

48950



UNION CARBIDE CORPORATION
P. O. BOX 8004, SOUTH CHARLESTON, W. VA. 25303
Silicones and Urethane Intermediates
South Charleston Plant

To: Mr. T. G. Swanson

Copy to: Mr. W. E. Ballard
Mr. J. R. Dean
Mr. C. E. Fry
Mr. D. G. Moshier
Mr. R. A. Ream
ES Routing List 2

From: J. G. Roy

Date: December 27, 1984

Subject: No. 2 Steam Plant
Asbestos Insulation Replacement

One of my MOP's for the 4th Quarter is the development of a program to phase out asbestos from the steam plant. I understood from Bob Ream at the time I was given the assignment that special budget provisions were being made to kick this off in 1985. This apparently came about during budget presentations to SUI division management.

Attached is my proposal to accomplish the overall objectives. I've not attempted to quantify the project into monetary blocks (Bob indicated that guideline established was \$250,000 expenditure per year) but have presented it in pieces as a control measure. I believe the approach outlined will provide the greatest return both from a health and economic standpoint.

By copy to the department staff I would appreciate their review of both the approach and the individual work list. The most successful projects are those with the most thorough and up front work.

J. G. Roy

JGR:kab

Attachments

K
cc Larr McChurl FF1
cc Joe Dodd FF1
ORIG TCS
R.V/TCS
Done line 25000
of expense set and
in 1985 budget for
asbestos
J.G.R./TCS
Rigg says money
(250M) is in 1985
budget

RECEIVED
JAN - 9 1985
ENGINEERING DEPT.

ASBESTOS ELIMINATION PROGRAM

Building 151

General:

As an energy conversion facility constructed in large part during its first twenty years (1933-1953), the No. 2 Steam Plant insulation was originally all asbestos. While rebuilds of precipitators and 25 Boiler together with SCESUP additions incorporated non-asbestos materials the majority of the insulation is still asbestos. In reviewing the health related issues involved in steam plant operation asbestos exposure has to be viewed as one of the critical few.

There are several approaches which can be taken to the resolution of this problem. One is to continue the phasing out of asbestos by attrition i.e. repairs with non-asbestos material. Asbestos can also be rendered harmless by sealing the surface to prevent fiber migration into the atmosphere. The ultimate solution is a total replacement of all asbestos material.

The program outlined in this proposal is aimed at elimination rather than control. Realizing that the project cannot be accomplished overnight so to speak, a phased approach incorporating discrete pieces of work (shown on attached listing) is recommended to proceed in the following manner.

Schedule/Funding

The precautions and health monitoring required for asbestos related work is very intensive in comparison to other types of work. For this reason it's important that specific task be started and completed in a timely fashion. Full replacement of all asbestos

has been roughly estimated to be in excess of one million dollars. The magnitude of the project almost dictates a phased approach not only from the monetary standpoint but to avoid chaos in the normal operation and maintenance activities. For this reason the attached list of work has been arranged in a quasi prioritized order. You will note that the first part deals with the removal only requirements. This of course offers the greatest return on expenditure. The remaining individual items are arranged to make significant contributions with emphasis on places where exposure is most likely. For instance the last item is the 25 Boiler feed water lines. These were fairly well sealed during SCESUP. Also work around the turbine generators should coincide with the scheduled overhaul of these machines.

Funding is visualized at a rate of 150-250M\$ pwer year and becomes a budgeted item until the project is completed. I believe that the distribution of work outlined below will produce a high level of efficiency to keep the overall cost well below the original estimate.

Work Assignments

There's plenty of work for everyone! However keeping in mind the need for timely execution coupled with costs, the project segments can be best accomplished by various groups. I visualize the use of demolition contractors, insulation contractors, and UCC Construction as well as Plant Maintenance. Each of these work groups offers unique skills that can expedite as well as minimize the costs for various pieces of the project.

Demolition Contractors: These people are geared to removal work

and can strip idle facilities very quickly at reasonable costs.

Insulation Contractors: Traditionally, UCC insulation projects have been overdone in the sense that we do a better job than is needed. Of course our costs are higher as a result. We almost universally use the block and wire approach with fabric coatings on large flat surfaces when other systems such as mineral wool on impaling wires and metal lagging are much more prevalent in the industry. Contractors having to meet stiff competition have developed systems that are sufficiently sturdy but minimize both material cost and labor. A case in point is the system we bought from Riley Stoker for the No. 25 Boiler rebuild. This project scoffed at by a number of construction people at the time, appeared to be flimsy. The entire insulation and lagging is supported on the impaling wires with no use of stand-offs and angle iron frames to mount the metal lagging. The bottom line is that it works and the cost is lower. For this reason I recommend that major equipment such as boiler ducts and breechings be insulated by contractors.

UCC Construction: For the most part it will be virtually impossible to isolate steam and hot boiler feed water headers for stripping and reinsulation. From a health, safety and economic standpoint, it is important that long segments of header be stripped with re-insulation following closely. Construction's manpower availability is suited to this kind of activity.

Maintenance: There is a definite need to address miscellaneous lines and equipment that while limited in scope are more time consuming. The nature of work it lends itself to an intermittent progression of this type of work and should aid in the overall plant

scheduling of this manpower short craft.

The following is a suggested assignment of the attached items to the various resources described above.

Demolition Contractors - 1 through 10

Insulation Contractors - 11 through 18

UCC Construction - 19 through 37

514 Maintenance - 38 through 49

Project Control

Unless tight control is exercised for a project of this type monies have a way of being spent without a whole lot to show for it. It is important that all changes accrue to a single account and be reviewed on a monthly basis. Additionally a file must be maintained to measure progress of the overall effort.

Some time ago a program was undertaken to identify all asbestos with stickers. I understand that stickers were placed on just about every insulated surface and I've heard insulators say that many non-asbestos surfaces were erroneously labeled. Also due to dirt conditions many stickers failed to stay in place.

Perhaps a more effective way to start the project would be to identify all of the insulation that is non-asbestos. There has been a lot of insulating done since 1972 and with our knowledge of project timing etc. it should not be difficult to pin down the majority of non-asbestos material. Identification with a stencil and spray paint would be a good first step leading into the overall project.

ASBESTOS ELIMINATION PROGRAM

Building 151

Removal From Idle Facilities

1. No. 14 I.D. fan and breeching to the south stack.
2. Nos. 12 and 13 precipitator hoppers
3. No. 12 I.D. fan
4. No. 14 Boiler air ducts, drum heads, feed water lines, and steam header to the main header isolation valve
5. No. 12 precipitator inlet breeching and duct
6. No. 12 Boiler air heater, ducts, feed water lines, drum heads, and steam header to the isolation valve at the main header
7. No. 12 bubar ash collector
8. No. 12 pulverizer coal ducts from feeders
9. No. 13 pulverizer coal ducts from feeders
10. No. 13 hot air ducts to the coal feeders

Remove and Replace With Non-Asbestos

11. South stack breeching serving Boilers 15 and 16
12. No. 15 I.D. fan and precipitator hoppers
13. No. 16 I.D. fan and precipitator hoppers
14. No. 16 precipitator inlet breeching
15. No. 16 Boiler air heater, ducts, drum heads, feed water piping, boiler headers and steam header to isolation valve at the main header
16. No. 15 Boiler, air heater, air ducts, drum heads, feed water piping, boiler headers and steam header to isolation valve at main header
17. No. 15 precipitator inlet breeching
18. No. 13 Boiler air heater, air ducts, feed water piping, drum heads, and steam header to the isolation valve at the main header

Remove and Replace With Non-Asbestos (Continued)

19. No. 25 atmospheric flash tank
20. No. 25 deaerator
21. No. 25 high pressure heater
22. South end 10 psi flash tank and associated headers
23. No. 3 deaerator
24. 200 psi flash tank and headers
25. 10 psi steam header from north end to No. 3 deaerator, south end feed water pumps and on to the 200-10 psi reducer; section behind 14 Boiler is OK
26. No. 2 deaerator and headers on that level
27. North 600-200 psi (Hagen) reducing station and all steam headers in that area
28. All deaerated boiler water lines below No. 2 deaerator on operating level
29. North end 200-10 psi reducing station and associated headers
30. South end blowdown recovery heat exchanger and associated piping
31. South end high pressure feed water heater and associated piping
32. All steam and feed water piping associated with Nos. 4 and 5 boiler feed water pumps
33. Ducts between the coal feeders and pulverizers serving Boilers 15 and 16.
34. Boiler feedwater headers serving all boilers
35. Main 200 and 600 psig headers through basement
36. West process steam header
37. North end boiler feedwater pump steam and water lines
38. Atmospheric flash tank and associated piping at No. 8 turbine generator
39. No. 8 turbine generator inlet and exhaust steam headers
40. All remaining miscellaneous lines and equipment at the basement level

Remove and Replace With Non-Asbestos (Continued)

41. All remaining miscellaneous lines and equipment on the operating level
42. All remaining miscellaneous lines and equipment at the 3rd level
43. All remaining miscellaneous lines and equipment at the 4th level
44. All remaining miscellaneous lines and equipment in the bunker and east roof level
45. All remaining miscellaneous lines and equipment on the main precipitator platform
46. All remaining miscellaneous lines and equipment on the 25 precipitator platform and I.D. fan area
47. Steam header serving 25 high pressure heater and all water piping associated with both the high pressure heater and the deaerator
48. All remaining miscellaneous lines and equipment in the structure located on the north side of 25 Boiler
49. All water lines and miscellaneous steam tracer supply headers in the north yard area and around the north residue manifold

JGRoy:kab

12/28/84