INTERNAL
CORRESPONDENCE

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

To (Name) J.R. Dean
Division
Location
Area

Date Nov. 1, 1984
Originating Dept
Area

Copy to Mailing Lists A-1, A-2
P.L. Deverick
M.E. Knopp
W.R. Marria
W.B. Spurlock

Subject Winterization Insulation

Attached is a status report of the Winterization Insulation that is being performed in the South Charleston Plant. Report will be issued weekly to show how we are progressing on the estimated Insulating work required for Winterization.

Note there is a column on report for Add Ons to orginal Winterizing List. This column could be changing from time to time, these changes will be denoted on report.

T.G. West

UNION CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE CORPORATION P. O. BOX 8004, SOUTH CHARLESTON, WV 25303
SILICONES AND URETHANE INTERMEDIATES
SOUTH CHARLESTON PLANT

To (Name) Attached Distribution
Division
Location
Area

Date August 14, 1984
Originating Dept.
Area

Copy to

Subject South Charleston Plant Winterization

During the 1983 Christmas Holidays we were hit with severe winter weather that cost the plant several hundred thousand dollars. Several units incurred less damage than others due to winterization of facilities before the cold weather. I suggest that each of you review your area of responsibility and make sure that you are adequately protected this year. This is normally one of our "long suits" and we were caught by particularly severe weather last year. However, we do have room for improvement in some areas and I expect you will take appropriate action for correction. You may want to talk to some of your peers that had good success last year.

R. G. Link

RGL/ph

1085Y

MEMO AVOID ORAL INSTRUCTIONS DATE 8-17 1984

TO John

All Insulators in Area 1 have had Asbestos Training in 1984

Jock

514-686-D ✚ DO IT THE SAFE WAY ✚ SIGNED _____

AREA 5 MAINTENANCE INTERNAL CORRESPONDENCE

UNION CARBIDE CORPORATION
P. O. BOX 8004
SOUTH CHARLESTON, W. V. 25303
SILICONES AND URETHANE INTERMEDIATES
SOUTH CHARLESTON PLANT 514

TO: R. H. Stodghill
D. R. Stokely

DATE: August 10, 1984

DIVISION:

ORIGINATING DEPT:

AREA: Silicones II

AREA: 5

COPY: S. J. Chanley
J. R. Dean
T. G. Swanson

SUBJECT: Winter Preperations for Silicones II

In an effort to minimize the potential for freeze-ups and additional other problems associated with winter weather, the maintenance department would like to ask the Silicones II staff to prepare a list for each of the following.

1. List the equipment related repairs required. This should include items such as steam tracers, steam traps, and pipe repairs.
2. List the insulation work needed.
3. List the facility repairs required such as doors, windows, and heaters.

When the lists are received by the maintenance department we will prepare a Ghant chart to indicate when the work can be expected to be complete. Please try to get the information to us as soon as possible, hopefully no later than August 24.

If you have any questions or comments concerning this subject please see me.

Sincerely,

D. B. Howard

D. B. Howard

UNION CARBIDE

INTERNAL CORRESPONDENCE

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

To (Name) J.R. Dean
Division
Location
Area

Date 8/14/84
Originating Dept.
Area

Copy to

Subject Winterization

To all area 2 Operations Dep. Heads.

Area 2 needs a Winteriaation list for the work you are expecting to need to prevent a freeze up like we had in the 83 & 84 freeze up.

We need this list by 8-24-84, so the list can be gant charted and a workable completion date established.

We need 3 seperate lists as follows with Work requests to perform the work.

One list should be for insulation work that is to prevent freeze ups.

One list to cover Steam traps and tracing.

The other list should be for window paines and doors that require work to prevent freeze ups.

Thanks

J.J. Ashworth

~~① T.G. SWANSON~~
② J.R DEAN

NEEDED INSULATION WORK

Bldgs 144/149

1. The leg on line to tank 1299 at number 11 switchbank, Also a 1 1/2' section of same line above/west of number 11 switchbank.

2. Following sections of line from tank 1299 to number 22 vaporizer.

   A. 2' section south side number 29 still.
   B. 5' section at number 22 vaporizer feed preheater.
   C. 3' section below vaporizer acid feed motor valve.
   D. 2' section at "I" beam overhead switch #830 (S.E. end York)

3. The following section of number 22 vaporizer residue purge line.

   A. 6' section at condensate pot tie-in.
   B. 6' section west side tank 1283.
   C. 8' section over york panel board.
   D. 8' section over switch gear, east side of York.
   E. 10' section at tank 1401 tie-in.

4. 3' section of tank 1703 acid line to number 13 swicthbank, south of tank 1366.

5. 1401 pumpout line to "I" beam, S.W. tank 1314, 8' section at "I" beam, also same line west side of number 29 still.

6. Tank 1315 pumpout line.

   A. 8' section south of number 29 still.
   B. 6' section downstream of cock valves south of number 29 still (at reducing station).

7. Tank car unloading line at pump suction, number 13 tank car spot.

8. Install the existing insulating blanket on number 1 evap. head on number 28 still.

9. Install the existing insulating blanket on number 23 kettle steam chests.

10. 3 1/2' section of tank 1270 pump discharge (to tank 1271).

11. Tank 1270 suction line.

12. Tank 1271 pump suction and discharge lines.

13. Tank 1271 circ. line at N.E. side of tank.

14. Feed line to number 24 vaporizer from tank 1271 (at feed orifice).

15. Number 24 furnace make line S.E. of tank 1271.

16. Drain legs on chiller trains at condensate pot.

17. Suction and discharge lines, number 29 still decanter B.L. pump.

NEEDED INSULATION WORK

Bldgs 144/149

18. Tank 1314 circulating/feed line to number 29 still.
19. Suction/discharge lines tank 1401 pump.
20. Line to S.W. side of tank 1299.
21. 1004 line at flange, west of number 11 switchbank.
22. Tank 1261 suction line (south side) (Note: Steam trap needs replacing).
23. Number 22 decanter suction/discharge lines.
24. Line to tank 1405 pump header, west of tank 1412.
25. Feed line to south end number 21 kettle.
26. Transfer line to tank 1366.
27. Suction line from tank 1368, 1369, 1367, 1365 also section of pump suction line.
28. Number 21 still decanter lines (on roof).
29. Number 29 still side make line to tank 1315.
30. Acetic acid line suction to tank 1703 pump and valve on N.E. side of tank.
31. Insulate 1001 line number 14 to number 12 switchbank (Note: Line to be tranced first).
32. Water outlet York gear box cooler.
33. Number 21 still make line (short section next to window) 149-2 and down to number 13 switchbank.
34. Number 21 kettle pump out line.

Additional work may be added to list as job progresses.

NEEDED INSULATION WORK

Bldg. 135

1. Water line from 2309.
2. Insulate steam line to number 3 still feed preheater.
3. Insulate discharge line from number kettle pump to cooler.
4. Insulate outlet steam from number 2 kettle condensate line.
5. Line to tank 1203 at number 10 switchbank.
6. Insulate lines to converter wash line.
7. Insulate from converter wash line.
8. Steam from number 3 still feed preheater.
9. Insulate water bottom layer line from decanter to number 10 switchbank.
10. New covering over number 2 kettle insulation.

NEEDED INSULATION WORK

Bldg. 174

East side

1. Evaporators water lines.
2. Steam line to DMV 1 & 2 evaporator.
3. Boiler feed water line to pump seal flushs.
4. 6238 make line (top)
5. 6237-36 make line (top)
6. 6236 suction
7. 6223 suction
8. 6236-37 P. O. line from make pump.
9. Finish number 43 line.
10. Finish 6210 make line.
11. water line to 6240 - 6250.

West side.

1. Water to 6210 jets.
2. Boiler feed water line to pump seal flushes, also line at end of 6210.
3. Charge line to 6210 finsih from 6206
4. 6201 calandria.

NEEDED INSULATION WORK

Bldgs. 133 & 134

Bldg 133 west side yard.

1. Repair the insulation on the oil lines to and from the merrill oil pumps.

Bldg. 133 inside

1. Repair the insulation on the inlet and outlet merrill oil lines to Number 5 furnace.

Bldg 133 south side

1. Repair the insulation on the steam line to number 5 furnace.

Bldg. 133 east yard

1. Repair the insulation on the stam line to and steam condensate line from tank 1197.
2. Repair the insulation on the steam line on the north side of tank 1197.
3. Repair the insulation on the oil line on the north side of tank 1197.
4. Repair the insulation on the air pot on the east side of tank 1197.
5. Repair the insulation on the water line from the 2309 pump.
6. Repair the insulation on the steam condensate pot and lines.

Building 134 west yard 1st level

1. Repair the insulation on the steam line to number 15 still feed preheater.
2. Repair the insulation on the feed lines to number 11 and 12 converters.
3. Repair the insulation on the feed valves on the bottom of number 11 and 12 converters.
4. Insulate the water lines to the vent drums on number 11 and 12 converters.
5. Repair the insulation on the oil lines from number 11 and 12 converters.
6. Insulate the oil lines in the pipe rack in the west yard.
7. Repair the insulation on the 1224 pump header.
8. Repair the insulation on the steam line to number 11 kettle.
9. Repair the insulation on the steam line to number 4 swtichbank.
10. Insulate the water line to number 4 switchbank.

Building 134 2nd level west side

1. Repair the insulation on the steam line to the converters.

Building 134 3rd level west side

1. Repair the insulation on top of number 11 converter.
2. Repair the insulation on the oil lines from number 11 and 12 converters.
3. Insulate the make valve on top of number 12 converter.
4. Insulate the steam line to number 12 converter.
5. Repair the insulation on the oil line from the surge tank to the system.
6. Repair the insulation on the make line from number 12 converter.

Buidling 134 4th level west side

1. Repair the insulation on the merrill oil surge tank.
2. Repair the insulation on the steam line to and steam condehsate from the surge tank.

Building 134 North side 2nd level

1. Repair the insulation on the 180 pound and 30 pound steam line at the main header.

Building 134 South yard 1st level

1. Insulate the brine lines to the brine pumps.
2. Insulate and repair the insulation from the brine pumps to and from bldg. 134.
3. Insulate the condensate line from the trap to the sewer from the 600 pound steam line near the brine pumps.
4. Repair the insulation on the 600 pound steam line from number 5 switchbank to bulding 134.
5. Repair the insulation on the steam line at number 6 switchbank.
6. Repair the insulation on the steam line at number 5 switchbank.
7. Repair the insulation on the brine line over tank 1117, 1118, and 1120.
8. Repair the insulation on the river water line at number 3 switchbank.
9. Repair the insulation on the steam line at number 3 switchbank.

Building 134 1st level east yard

1. Repair the insulation on the steam line to number 2 switchbank by tank 1112 and 3 legs by number 2 switchbank.
2. Repair the insulation on the make line from the wash column to number 2 switchbank and from number 2 switchbank to tanks 1107 and 1108.
3. Repair insulation on process water line from number 2 switchbank to 2309 pump.
4. Insulate the water line from inside building 134 to the acetol reactor.
5. Repair the insulation on the steam and water lines on number 1 switchbank.
6. Repair the insulation on the steam line by tank 1101.
7. Repair the insulation on the steam condensate line from number 17, 15, & 14 stills.

Building 134 1st level inside

1. Repair the insulation on the 180 and 30 pound steam headers through the building.
2. Repair the insulation on the steam lines from the header to number 15 and 14 stills.
3. Insulate the number 15 still steam chest.
4. Insulate the steam condensate line from number 15 still to header.
5. Insulate the steam trap on number 17 still.
6. Repair the insulation on the bottom head on number 17 still calandria.
7. Insulate the water leads from the river water strainer to the instrument air kickoff instrument on 2nd floor.
8. Insulate the bottom head and pipe on number 13 still calandria.
9. Repair the insulation on the brine return line.
10. Repair the insulation on the converter feed lines.
11. Repair the insulation on the steam line and calandria on number 16 still.
12. Insulate the steam line to number 12 still calandria.
13. Insulate the steam trap and condensate line on number 12 still.
14. Insulate the condensate line from the calandria on number 16 still.
15. Insulate the steam header valve, the steam tracer lines, and header, and steam trap lines from the traps south end of building 134.

Building 134 inside 2nd floor

1. Repair the insulation on the steam line valve and DMV to number 16 still.
2. Repair the insulation on the steam line around the valves on DMV to number 12 still.
3. Insulate the steam line and steam condensate on the heater at the south door.
4. Repair the insualtion on the steam line and the water perheater to number 12 still.
5. Repair the insulation on the 180 pound steam line to number 12 vaporizer.
6. Repair the insulation around the valves and DMV on the steam line to number 13 still.
7. Repair the insulation around the valves and DMV on the steam line to number 13 still.
8. Repair the insulation on the feed line to number 11 converter.
9. Repair the insulation on the brine line to the condenser.
10. Insulate the water feed and water leads on water feed to the wash column.

Building 134 inside 3rd level

1. Repair the insulation on the brine line to the VME vent condensate.
2. Repair the insulation on the acetaldehyde vent condenser.
3. Repair the insulation on the 600 pound steam reducing DMV and line.
4. Repair the insulation on the steam line to number 17 still steam jets.
5. Repair the insulation on the steam line to number 13 still steam jets.
6. Repair the insulation on the steam line to number 12 still steam jets.

Building 134 Roof

1. Repair the insulation on the instruments on number 12 still.
2. Repair the insulation on the water line to number 13 still condenser.
3. Insulate the water line to number 13 still jet condenser.
4. Repair the insulation on the steam line to number 13 still jets.
5. Repair the insulation on the steam line to number 17 still jets.
6. Insulate the water line to number 17 still jets.

JOHN, FOR YOUR INFORMATION
JOCK

MEMO AVOID ORAL INSTRUCTIONS DATE 9-19-84 198__

TO Knopp/Marria

Listed below are things that must be done and feedback required.

o All insulation (Asebestos) is to be picked up the evening of the day it is stripped. Item 4 of John Deans letter dated 9-13-84 requires you to report to the trucking supervisor. You must also report the deficiencies to me which I have to report to John Dean.

o Report to C.R.G. daily the number of signs installed, approximately how many feet of is covered by the signs and what eupipment.

o Winterization is a must, including other type of work than insulation. Work what ever overtime is necessary as if you were going to be completed by 11-15-84.

o As per Tom Washingtons Safety Signal Report, what have we done to identify Asbestos insulation repairs needed? I want you to get with Ernie Smith, Kathy, Washington, and to review the units and come up with a list of repairs needed.

514-686-D ✚ DO IT THE SAFE WAY ✚ SIGNED _____

September 24, 1984

TO: D. F. Finley
F. L. McCarty

COPY: J. A. Ashworth
D. R. Criner
J. R. Dean
E. A. Dumont
M. D. Ginn
S. Rossi
Polyols Technical Staff

FROM: D. H. Ott

SUBJECT: Winterization Planning and Maintenance Work

Just as a follow-up to our discussions last week:

1. Work scope/job lists are fairly well defined.
   Phase IV area is more straightforward than the Bldg. 103 area.

2. Priority of work should be done in a way to give us an equipment system one at a time. The following basic guideline should be used.

Phase IV		Bldg. 103	
1st	SS/EB's	1st	SS/EB's
2nd	Utility Supplies	2nd	Utility Supplies
3rd	#7 Rx, IX	3rd	#3 Polymer
4th	Isop Recovery	4th	#1 Flex and #5 IX
5th	#8 Rx, IX	5th	#2 Polymer
6th	#9 Rx, IX	6th	#3 Flex and #1 IX
		7th	#2 Flex and #2 IX
		8th	Butyl Chloride

3. Insulation work appears to be a critical. Job vs. manpower must be addressed by Maintenance management.

4. I am looking for a weekly update of progress against total planned work. This needs to be quantified well enough to be able to judge if resources will meet need.

5. Be sure that SO's are written to be able to collect up the costs associated with winterization.

6. I want to approve overtime associated with winterization preventative work.

Love

D. H. Ott

DHO/cgb

Temporary Schedule
For
Out of Craft Insulators

Group		A	B	A	B	A			B	A	B	A	B			A	B	A	B	A			B	A	B	A	
Days	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	
																							22	23	24	25	2
October	28	29	30	31																							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	A	20	21	Hol	H
November	25	26	27	28	29	30																					
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	2
December	23	Hol	Hol	26	27	28	29	30	31																		
										Hol	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	1
January	30	21	22	23	24	25	26	27	28	29	30	31															
													1	2	3	4	5	6	7	8	9	10	11	12	13	14	1
February	17	18	19	20	21	22	23	24	25	26	27	28															

Area 1 Project Insulators

Group A	Located	Group B	Location
G A Dean	A-5	F W Bowles	MW Shop
N J Jeffers	A-1	D L Holcomb	MW Shop
L W Buskirk	MW Shop	K D Pritt	MW Shop
R G Roberts	MW Shop	G E Shaffer	A-1
L J Woolwine	MW Shop		

Area 2 Project Insulators

C M Grames	222	L. Pethuny	261
G W Moore	222	M W Slater	822
M J Rogier	320	R W Watson	222
D E Holmes	A-3	D H Hager	A-3
D E Pearl	A-1	C A Fisher	133 Tel

Note: Out of craft insulators are not scheduled on Holida

UCC - LINCOLN 1065

PERSONNEL MOVEMENT

W/E _____

	NAME	PAYROLL NUMBER	FROM LOCATION	FROM CRAFT	EFFECTIVE DATE	TO		
1	L. PETTWAY	11488	A-2	EL		A-2		
2	C. M. GARNES	11499	A-3	EL		A-2		
3	D. E. DEAHL	11503	A-1	EL		A-1		
4	M. W. SLATER	11391	A-3	EL		A-2		
5	G. W. MOORE	11509	A-3	EL		A-2		
6	R. W. WATSON	11512	A-3	EL		A-2		
7	D. H. HAGER	11549	SHOP	IM		A-2		
8	M. J. ROGIER	11569	SHOP	IM		A-2		
9	N. J. JEFFERS	11597	A-1	IM		A-1		
10	C. A. FISHER	11599	A-3	IM		A-2		
11	F. W. BOWERS		MW Shop	MW		A-1		
12	L. W. BUSKIRK	11699	MW Shop	MW		A-1		
13	D. L. HOLCOMB	11701	MW Shop	MW		A-1		
14	R. G. ROBERTS	11738	MW Shop	MW		A-1		
15	L. J. WOOLWINE	11578	MW Shop	MW		A-1		
16	K. D. PRITT	11844	MW Shop	MW		A-1		
17	G. E. SHAFFER	11612	A-1	PF		A-1		
18	D. E. HOLMES	11707	A-3	PF		A-2		
19	G. A. DEAN	11843	A-5	PF		A-2		
	T. K. PAWLEY		SECOND SKILL			A-1		

L NC SKILL - INSULATORS

PERSONNEL MOVEMENT

W/E _____

NAME	PAYROLL NUMBER	FROM LOCATION	FROM CRAFT	EFFECTIVE DATE	TO LOCATION	TO CRAFT	COMMENTS
G.W. CHAMBERS	11370	A-1	CA		A-1		
R.O. MEANS	11624	A-3	CA		A-2		
H.P. WITZBERGER	11632	A-5	CA		A-1		
R.N. SMITH	11720	A-2	CA		A-2		
T.E. PAULEY	11491	A-1	CA		A-1		
			A-1 (12)				
			A-2 (12)				

OUT of CLASS

EL	4	3
IM	2	2
MW	3	3
PF	1	2
	10	10

INSULATORS

	HAVE	NEED
IR	22	22+41
OT	12	
CA	4	
SWAP	8	
Out of class.	10	
	56	63

To Do

① Take their 120 probation period & start it ~~□~~ when they cease work as insulators.

this is worth ② not necessarily correct.

Can they compete for O.T as insulators when they work as insulators → they'd be off as insulators for O.T. when their going to apprentice training.

AVOID ORAL INSTRUCTIONS DATE 9/27 198 4

RD

No. on Hand (Signature)

5	46
[illegible]	41
[illegible]	39
[illegible]	33
[illegible]	28
13	25
14	22

-D ✚ DO IT THE SAFE WAY ✚ SIGNED ALG

AMPAD EFFICIENCY LINE® 22-210

AMPAD EFFICIENCY LINE® 22-210

DEPT.	1 JAN.	2	3 FEB.	4	5 MAR.	6	7 APR	8	9 MAY	10	11 JUNE	12	13 JULY	1	2 AUG	3	4
	HOURS	EQ PEOPLE	HOURS	EQ PEOPLE	HOURS	EQ PEOPLE	HOURS	EQ PEOPLE	HOURS	EQ PEOPLE	HOURS	EQ PEOPLE	HOURS	EQ PEOPLE	HOURS	EQ PEOPLE	
003											28.0	0.2			36.0	0.2	
004	405.5	2.8	293.0	2.1	451.2	3.1	422.3	3.1	305.0	2.0	164.0	1.2	624.6	4.3	180.0	1.2	
007							91.0	0.7	22.0	0.2	139.0	1.0	99.0	0.7	56.0	0.4	
049	351.0	2.4	24.0	0.2	80.0	0.6	96.0	0.7	136.0	0.9	130.0	0.9	84.5	0.6	86.5	0.6	
064	207.0	1.4	499.3	3.6	466.5	3.2	226.5	1.6	263.0	1.7	398.0	2.9	398.5	2.8	555.5	3.7	
077	388.0	2.7	267.8	1.9	340.0	2.4	200.0	1.5	278.6	1.9	122.0	0.9	272.0	1.9	454.0	3.0	
082	160.0	1.1	68.0	0.5	43.5	0.3					143.5	1.0	197.0	1.4	176.0	1.2	
083	102.0	0.7	277.0	2.0	214.0	1.5	160.0	1.2	169.0	1.1	213.0		78.0	0.5	337.0	2.2	
103	1243.7	8.6	1006.3	7.3	1057.3	7.3	583.5	4.2	598.2	4.0	696.5	5.1	439.0	3.1	912.5	6.0	
106	789.0	5.4	594.3	4.3	758.5	5.3	311.0	2.3	281.0	1.9	661.8	4.8	224.0	1.6	419.5	2.8	
107																	
113	214.0	1.5	223.0	1.6	188.0	1.3	190.3	1.4	307.5	2.0	99.0	0.7	146.0	1.0	85.0	0.6	
115	59.0	0.4	40.0	0.3	196.5	1.4	181.0	1.3	231.0	1.5	69.0	0.5	103.0	0.7	18.0	0.1	
121							19.0	0.1	58.0	0.4	89.5	0.7	50.0	0.4	231.0	1.5	
123																	
169	411.0	2.8	386.0	2.8	505.5	3.5	336.0	2.4	354.0	2.3	631.5	4.6	500.5	3.5	477.5	3.2	
222	42.0	0.3	33.0	0.2	16.0	0.1	32.0	0.2	172.0	1.1	24.0	0.2	56.0	0.4	80.0	0.5	
227	72.0	0.5					94.0	0.7									
228	16.0	0.1	154.0	1.1	48.0	0.3	240.0	1.7	16.0	0.1	34.0	0.3					
229											35.0	0.3			144.0	1.0	
326	18.0	0.1	76.0	0.6					16.0	0.1	38.0	0.3	61.0	0.4			
TOTAL	4478.2	30.9	3911.7	28.4	4365.0	30.3	2882.6	20.9	3207.3	21.2	3715.8	26.9	2933.1	20.4	4248.5	28.1	

UCC 003199

514 Insulation Needs

Department		Day-to-Day Repair Needs		Winterization Needs				Asbestos Repair Needs		Current Staffing Allocated	Staffing Shortages		
Name	Number	Eq People	Basis	Hrs Reqd	Basis	Eq People @ MO	Eq People Annualized	Hrs Reqd	Basis	Eq People	Repair Only	Rep & Wint	Rep, Wint, & Asb
Water Treatment	003	0.05	MBH Actual	160	Wint List	0.6	0.1	1050	Guess	0.04	0.01	0.1	0.1
Steam Plant	004	2.5	"	800	Wint List	2.8	0.5	9900	Estimate	2.1	0.4	0.9	1.1
Utility Dist.	007	0.4	"	448	No List	1.6	0.3	3000	Guess	0.3	0.1	0.4	0.3
Mixing	049	0.9	"	472	Wint List	1.7	0.3	380	Guess	0.7	0.2	0.5	0
Upper Island	064	2.6	"	3488	Wint List	12.2	2.0	3600	Guess	2.0	0.6	2.6	0.4
Mainland	077	2.0	"	184	Wint List	0.6	0.1	750	Guess	1.7	0.3	0.4	0.1
PVA Resins	082	0.7	"	400	No List	1.4	0.2	750	Guess	0.6	0.1	0.3	0.1
Solution Vinyls	083	1.2	"	1000	Wint List	3.5	0.6	1800	Guess	1.0	0.2	0.8	0.2
Silicones II	103	5.7	"	1600	Wint List	0.6	0.9	0	Guess	4.7	1.0	1.9	0
Polyols	106	3.6	"	992	Wint List	3.5	0.6	750	Guess	3.0	0.6	1.2	0.1
Spec Cat	113	1.3	"	720	No List	2.5	0.4	2700	Guess	1.1	0.2	0.6	0.3
Spec Chem	115	0.8	"	480	No List	1.7	0.3	900	Guess	0.7	0.1	0.4	0.1
Middle Island	121	0.4	"	540	Wint List	1.9	0.3	900	Guess	0.3	0.3	0.4	0.1
Oxide Adds	169	3.1	"	970	Wint List	3.4	0.6	1200	Guess	2.6	0.5	1.1	0.1
Distribution	222/227	0.5	"	860	Wint List	3.0	0.5	1200	Guess	0.4	0.1	0.6	0.1
Bulk Terminal	228/229	0.6	"	0	No List	0	0	150	Guess	0.5	0.1	0.1	0
Maintenance	326	0.2	"	256	No List	0.9	0.1	450	Guess	0.2	0.0	0.1	0.1
Total Plant		26.55		13,370 (1)		41.9	7.8	29,480		22 (3)	4.6 (3)	12.4 (3)	15.6 (3)(2)

(1) Based on original winterization lists — add-on lists continue to come in and in some cases will double the original list

(2) Assumes asbestos repairs will be spread over a 5 year period

(3) Considers current staffing — by 1 Jan 1995 our current staffing will reduce by 3-5 people

INSULATORS ONLY

Department		Day-to-Day Repair Needs		Winterization Needs				Asbestos Repair Needs		Current Staffing Allocation	Staffing Shortages		
Name	Number	Eq People	Basis	Hrs Reqd	Basis	Eq People 2 Mo	Eq People Annualized	Hrs Reqd	Basis	Eq People	Repair Only	Rep & Wint	Rep, Wint, & Asb
Water Treating	003	0.05	1984 Actual	160	Calc w/est	0.6	0.1	1		0.04	0.01		
Steam Plant	004	2.5	"	800	Calc w/est	2.8	0.5	2		2.1	0.4		
Utility Dist.	007	0.4	"	400	Calc w/est	1.4	0.2	3		0.3	0.1		
Mixing	049	0.9	"	472						0.7	0.2		
Upper Island	064	2.6	"	3488	Est. w/est	12.2	2.0	11		2.0	0.6		
Mainland	077	2.0	"	184						1.7	0.3		
PVA Resins	082	0.7	"	400	Calc w/est	1.4	0.2	1		0.6	0.1		
Solution Vinyls	083	1.2	"	1000	Calc w/est	3.5	0.6	2		1.0	0.2		
Silicones II	103	5.7	"	1600						4.7	1.0		
Polyols	106	3.6	"	992	Calc w/est	3.5	0.6	1		3.0	0.6		
Spec Cat	113	1.3	"	720	Calc w/est	2.5	0.4	1		1.1	0.2		
Spec Chem	115	0.8	"	480	Calc w/est	1.7	0.3	1		0.7	0.1		
Middle Island	121	0.4	"	540	Est. w/est	1.9	0.3	1		0.3	0.8		
Oxide Adducts	169	3.1	"	970						2.6	0.5		
Distribution	222/227	0.5	"	800	Calc w/est	2.8	0.6	3		0.4	0.1		
Bulk Terminal	228/229	0.6	"							0.5	0.1		
Maintenance	326	0.2	"	240	Calc w/est	0.8	0.1	—		0.2	0.0		
TOTAL PLANT		26.55					↓			(22)	4.6		
						285	1733						
						351	58						

UNION CARBIDE

INTERNAL CORRESPONDENCE

BUSINESS CONFIDENTIAL

UNION CARBIDE CORPORATION P. O. BOX 8004, SOUTH CHARLESTON, WV 25303
SILICONES AND URETHANE INTERMEDIATES
SOUTH CHARLESTON PLANT

To (Name) Mr. L. W. Phair
Division
Location
Area

Date October 23, 1980
Originating Dept.
Area

RECEIVED
OCT 31 1980
R. P. Fulknier

Copy to Mr. R. P. Fulknier
Mr. W. A. Garrett

Subject Project Insulation Crew

The work of the Project Insulation Crew on the plant's main steam headers will be completed within the next 2-3 weeks. We need to set direction for future utilization of these people.

Experience at other UCC locations, discussions with you and members of the Maintenance Management Team, plus input from Operating Department Heads and C. E. Fry, all suggest that we should consider retention of this insulation crew to upgrade insulation within our operating units. This conclusion is supported strongly by members of the present crew. All respondents feel that the plant's present insulation needs can most effectively be addressed by a combination of project crew and our regular area insulators. The project crew is to concentrate on preplanned "blocks" of upgrading, with the area insulators attending to miscellaneous insulation work associated with day-to-day unit repairs or alterations.

We propose to form a standing Project Insulation Crew of 10 people, plus its own supervisor. Past efforts to effectively use such a crew under the direction of the insulator supervisor in the particular area where work was being carried out have not proved to be successful on a continuing basis. They did not receive sufficient supervisory attention, and there was a tendency for their efforts to be dissipated on day-to-day miscellaneous stripping and repair work. The proposed crew would be used solely for upgrading work, planned in advance in conjunction with the operating department receiving the service. The Area Maintenance organization would neither borrow crew personnel, nor be associated with their supervision. To help assure this separation, it is proposed that the crew's second-level of supervision be provided by E. O. (Dick) Harrah, whose qualifications include a past assignment as head of our old Area 6.

We are now in the process of identifying "blocks" of insulation upgrading work within each operating department in the plant. A block of such work is roughly defined as any combination of line, vessel, or equipment insulation within a department that meets the following criteria: 1) A minimum of one week and a maximum of 2-3 weeks of work for the proposed crew, and 2) Is confined to a small enough geographical area of the particular unit to permit effective hour-to-hour supervision. The concensus is that scattered work, or longer intervals of concentration, would promote lower productivity.

When identified, blocks of upgrading work would be scheduled on a plant-wide priority basis, considering input from both the involved departments and C. E. Fry. Prior U/A would be secured with the owning Department Head as to the scope of each block, the duration of work, and the probable cost. Required materials for each job would be on site before work started, and would be secured before the preceding job was completed. Progress reports on each block of work would be prepared as the job moved toward completion to assure that commitments were met, or deviations were understood and accepted. Crew-related costs will be assigned to a new account, 327440, so they can be separated from area insulation work both on a departmental and a plant-wide basis.

The present steam-line crew would serve as the nucleus for formation of the new crew, with some limited personnel changes. Such changes would provide an appropriate craftsman-apprentice balance, and assure that all members of the new crew were assigned at their election. Future crew assignments would be made as necessary to maintain these conditions, where possible. We suggest that the new crew be housed in Bldg. 428, using existing crew facilities, and that we continue our present practice of providing transportation to the current job site.

If this approach to plant insulation receives your endorsement, we would intend to sustain it as long as meaningful crew-type work was available, and our clients agreed that the approach was cost-effective. A failure to meet either of these necessary conditions would initiate an immediate review of our approach, to alter or eliminate the special crew.

As expressed earlier, there is a broad concensus in support of this proposal. Your endorsement, and that of the other managers is solicited. Also solicited is approval to recognize the contributions of the present crew's upgraded supervisor, Mr. W. B. (Bill) Spurlock. We recommend that he be promoted to Maintenance Supervisor and be assigned responsibility for the new crew, reporting to Dick Harrah. He has demonstrated an ability to get the work done, not only on the steam headers but on the recent EO line repair job which called for the insulation of 2500 feet of 2-inch line on a crash basis. He has the support of the present crew, as well as the Maintenance Management Team. We have reviewed the potential to promote a female, minority, or younger craftsman, and conclude that this opening does not represent a viable opportunity for such a promotion. This promotion will not detract from our ability to meet the 1981 exempt head count limit in Maintenance. Please advise as to how we should proceed.

J. S. Cornell

JSC:mb

Profo-Bag®

CUSTODIAL/MAINTENANCE WORKERS' ASBESTOS SAFETY BAG

Profo-Bag offers quick, efficient method for performing work on and around asbestos-covered pipes.

Asbestos-covered pipes pose serious potential problems for the owners and operators of private buildings and industrial facilities. Contamination can be released into the air by deterioration as well as by removal, emergency repairs and routine maintenance work on joints, valves, fittings and hangers.

Because custodial and maintenance personnel can be particularly vulnerable to the long-term effects of this contamination, government authorities now require strict procedures for all asbestos-related work.

The **Profo-Bag®** is a portable, sealed workspace which holds in airborne contamination created by work on a pipe. Properly used, the **Profo-Bag®** can reduce the exposures of your personnel at the same time it reduces the costs associated with such work. For instance, federal asbestos guidelines require that a building space be enveloped, or "contained," in an airtight seal of polyethylene before work begins.

However, by using a **Profo-Bag®** for work on small runs of pipe, the need for costly containment tents and decontamination chambers is eliminated.

In 1983, the U.S. Environmental Protection Agency completed its analysis of the new **Profo-Bag®**, or "glove bag," technique and recommended its use in the new federal asbestos guidelines. At the same time, in its recent feasibility study, the U.S. Navy reported **Profo-Bag®** technology to be "a workable solution" which takes "about one-fifth the man-hours required for a standard containment tent."

The 7-mil, 50" X 64" **Profo-Bag®** is a sealed work space accessible by poly-coated Tyvek sleeves. This sleeve coating prevents microscopic contamination from escaping through the porous Tyvek fabric. Sleeves are heat-sealed to the main body of the bag to guarantee the maximum in air-tightness and seam strength.

When full, the bag serves as its own asbestos disposal container, complete with required warnings.

ACTI also offers a worker's manual and video tape explaining exactly how to plan and execute a **Profo-Bag®** project.

Asbestos Control Technology, Inc.
P.O. Box 183, Maple Shade, NJ 08052 / 1-800-221-1911 / 609-235-1190

ASBESTOS HANDLING 8/21/85

Plant Engineering - X 2574 Mark Mullins

Had no specific info. suggested I call Gordon Gasket.

Gordon Gasket Co. - 925-2136 Joe Bowman
Kanawha City

They use no special handling procedure while cutting asbestos gasket material. They do keep their work area clean to avoid accumulation of debris. They use dust mask while handling asbestos fabric because it does have loose fibers. Suggested I call the customer service rep. for John Manville.

John Manville 1-800-233-3900
Manville, N.J. Bill Hall X-2462

They have no special procedures. The amount of binder in compressed gasket material holds the asbestos with particles the size of cuttings. In their recommendation gloves and dust mask are sufficient protective equip. Someone involved with extensive handling may use coveralls. Bill is sending me some of their brochures.

General Engineering 768-4964
MacCorkle Ave. Marion Matthews

No special handling procedures. They have been OSHA inspected with no citations.

Nobel Rubber 744-4658
7th Ave. S.C. Barrett McDonald

No special handling procedures while cutting asbestos gasket material. He had an OSHA inspection with no citations. He quit his job in the contract service.

ASBESTOS HANDLING 10/10/85

B. Stump, Dick Hovak, Debbie , Smitty, Bill Young, Walter Kyle Rattlesnake.

- Bill Young – smoke air flow at gasket table.
- Debbie – Want wide effort to survey room and Mdy ventilation.
- Present System – Not adequate to control asbestos fiber dust - will fly. system limited to clean up.

JV **MANUFACTURING COMPANY, INC.**
P.O. Box 371 De Pere, Wisconsin 54115 (414) 432-7574

Good Day!

Enclosed please find a catalogue sheet describing the "Collector" asbestos removal chamber. If you are looking for a quality glove bag, you need look no further. We have 12 different sizes and styles, including a verticle bag, at very competitive prices. For more information, please contact me.

Thank you,

Argil D. White

Argil D. White
President

Ship To: 1121 McDonald Street, Green Bay, WI 54303

REMOVAL CHAMBER

THE **COLLECTOR!**™

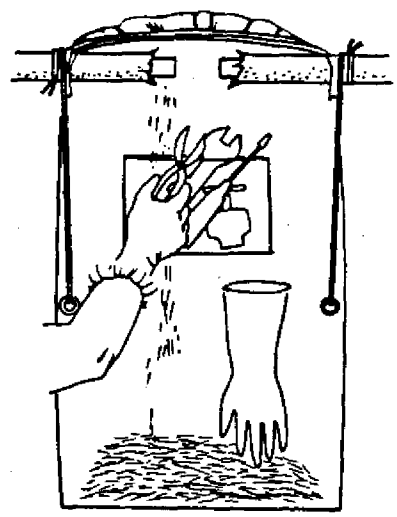
The Safe, Effective Asbestos or other Contaminant Removal chamber from Arg-Dri®

ALLOWS WORK IN A TOTALLY CONTROLLED ENVIRONMENT.

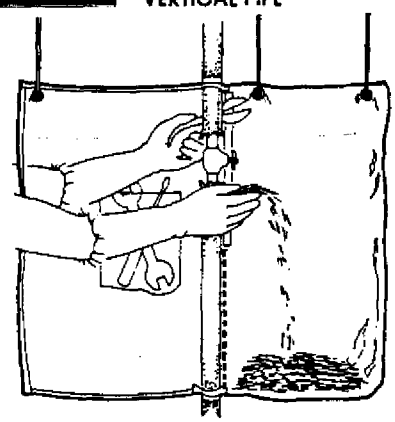
Using the Arg-Dri® asbestos pipe removal chamber is an extremely effective procedure designed exclusively to protect the worker and to prevent asbestos fibers from escaping into the atmosphere.

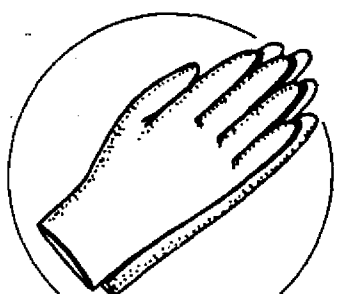
Arg-Dri® is easy to use and available in a variety of models, made of 6 mil. high quality, durable polyethylene, excellent internal visibility. 3 mil also available - see specs.

HORIZONTAL PIPE

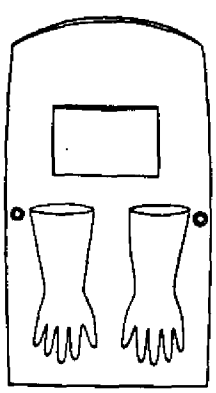


VERTICAL PIPE



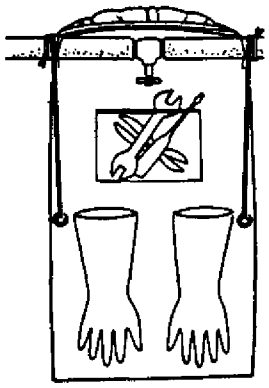


OPTIONAL COTTON-FLOCKED RUBBER GLOVES TO PROVIDE EVEN GREATER FLEXIBILITY AND COMFORT.

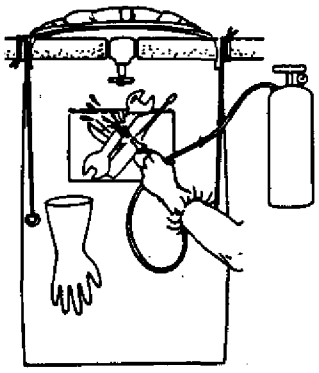


EASY TO USE - 5 SAFE, EFFICIENT STEPS

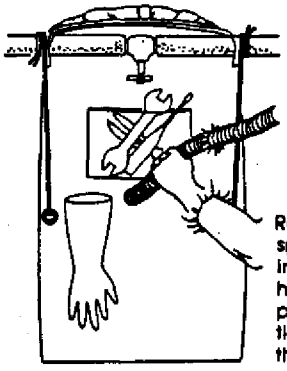
ARG-Dri®
For Additional Information Contact
J. V. Manufacturing Co., Inc.
1121 McDonald Street • Green Bay, WI 54303 • 414-432-7574



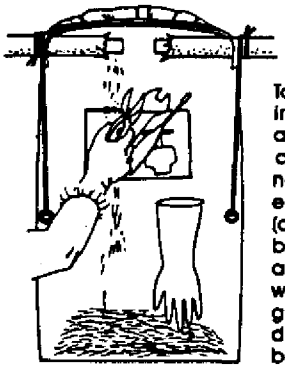
The tools you will use should be put into the inside pouch before closing the bag around the pipe. Place the chamber around the pipe, bring the open edges together and seal with tape. Grommets are placed in center of bag for added support by tying rope to the pipe from the grommet.



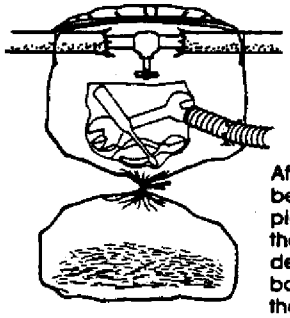
In an area, away from the work area, slit an opening only large enough to hold the vacuum hose. Through this opening, with a portable sprayer, spray the area to be worked on until it is wet.



Remove the sprayer nozzle and insert the vacuum hose. Tape this porthole to form a tight seal around the vacuum hose.



To perform the task, insert your hands and arms into the chamber. With the necessary equipment (already in the bag) remove the asbestos from the work area and gently collect the debris in the bottom of the bag.



After the job has been completed, place the tools in the pouch, seal the debris in the bottom, vacuum the top area and remove bag for disposal.

SPECIFICATIONS FOR ARG-DRI® ASBESTOS PIPE REMOVAL CHAMBERS

Product Code	Product Description	Packed Per Case	Industrial Cost Per Case			
			1-4 Cases	5-9 Cases	10-19 Cases	20 + Cases
600203	Horizontal 3 mil, 36"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve & Glove	12				
600206	6 mil, 36"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve & Glove	12				
600306	6 mil, 60"W x 72"L, Printed, Tool Holder, Embossed 28" Poly Sleeve & Glove	12				
600406	Vertical 6 mil, 60"W x 72"L, Printed, Tool Holder, Embossed 28" Poly Sleeve & Glove	12				
600213	Horizontal 3 mil, 36"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve w/cotton flocked lined rubber glove	12				
600216	6 mil, 36"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve w/cotton flocked lined rubber glove	12				
600316	6 mil, 60"W x 72"L, Printed, Tool Holder, Embossed 28" Poly Sleeve w/cotton flocked lined rubber glove	12				
600416	Vertical 6 mil, 60"W x 72"L, Printed, Tool Holder, Embossed 28" Poly Sleeve w/cotton flocked lined rubber glove	12				
600506	Horizontal 6 mil, 44"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve & Glove	12				
600516	Horizontal 6 mil, 44"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve w/cotton flock-lined rubber glove	12				
600606	6 mil, 60"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve & Glove	12				
600616	6 mil, 60"W x 60"L, Printed, Tool Holder, Embossed 28" Poly Sleeve w/cotton flock-lined rubber glove	12				
	Arg-Dri® DISPOSAL BAG (BURIAL)					
600103	3 mil, Printed, 36" x 60"	100				
600106	6 mil, Printed, 36" x 60"	50				
600806	6 mil, Printed, 60" x 72"	35				
600706	6 mil, Printed, 44" x 60"	75				
600906	6 mil, Printed, 60" x 60"	72				

ARG® -Dri

For Additional Information Contact
J. V. Manufacturing Co., Inc.
1121 McDonald Street • Green Bay, WI 54303 • 414-432-7574

UNION CARBIDE CORPORATION
SOUTH CHARLESTON PLANT
Safety and Health Department
South Charleston, West Virginia 25303

TO: J. K. Corrie
P. R. Douglas
W. D. Howard
C. E. Priestley
J. R. Roy
T. G. Swanson

DATE: September 25, 1986

CC: J. R. Dement
D. A. Gosselin
C. H. Hancock
C. R. Rotthoff
M. J. Shoger
E. D. Southard

SUBJECT: New Asbestos Construction Standard

Attached for your information is a summary of the Asbestos Construction Industry Standard. This standard establishes a permissible exposure level of 0.2 fibers per cubic centimeter which represents an order of magnitude reduction in comparison with the prior limit of 2 fibers per cubic centimeter.

If you have any questions, please contact me at your convenience.

W. J. Vincent
W. J. Vincent

WJV/yc
1692A

Attachment

SUMMARY OF THE CONSTRUCTION STANDARD

The construction standard has nine (9) appendices. Appendices A, C, D, and E are mandatory. The other five (5) B, F, G, H, and J, are non-mandatory.

KEY POINTS

P.E.L. (Permissible Exposure Limit) = 0.2 - Fibers per cubic centimeter of air determined as an 8-hour time - weighted average airborne concentration. Triggers restricted areas, respiratory protection, protective clothing, and other requirement.

Action Level = 0.1 f/cc as an 8-hour TWA. Triggers exposure monitoring, worker training, medical monitoring.

No Ceiling Limit

Separate Standards - Apply to general industry and to construction, because of differences in work forces and work sites. (Industry's fixed site manufacturing workplace, long term employees versus construction's short-term projects, temporary work sites, highly mobile work force, and unique characteristics of some operations.)

Both standards provide requirements for methods of compliance, personal protective equipment, employee monitoring, medical surveillance, communication of hazards to employees, regulated areas, housekeeping procedures, and record keeping.

Scope and Application of the Construction Standard

The construction standard is geared to apply increasingly stringent requirements to the highest potential exposures. Six key construction activities that are associated with asbestos are listed; demolition/salvage; removal/encapsulation; construction/alteration/repair/maintenance/renovating; installation; spill/emergency cleanup, and transportation/disposal/containment on site.

Startup Dates

For the construction standard, (effective July 21, 1986) all requirements must be complied no later than January 16, 1987.

Communication Among Employees

This requirement provides for the safety and health of other workers on multi-employer work sites. Construction employees directly involved in asbestos related activities must inform other employers working nearby of the existence of asbestos, hazard levels, regulated areas, and rules.

Exposure Monitoring

The new asbestos standards cover specific provisions for monitoring, including methods, frequency, initial monitoring, and employee notification, because of the differences in work sites, the general industry and the construction standards differ in some monitoring practices (i.e. frequency). However required monitoring methods and equipment for sampling are identical.

The construction standard calls for daily monitoring of employees unless all employees are equipped with positive pressure supplied air respirators. The standard also allows for discontinuation of monitoring if employee exposures can be statistically shown to be below the action level (0.1 f/cc). In addition, the standard does require initial monitoring to determine the effectiveness of engineering controls.

Respiratory Protection

The standard stipulates rules for respirator selection, program of proper use, and facepiece fit. The standard stipulates that the employer must provide respirators appropriate for an employee exposure. To help assure that respirators provide employee with the necessary protection, the standard requires employers to periodically perform either qualitative (QLFT) or quantitative (QNFT) fit test on all users of half mask negative pressure respirators. If negative pressures are used, high efficiency filters are mandatory.

Protective Clothing and Equipment

The new standard stipulates that protective clothing is to be supplied to all employees exposed above the PEL of 0.2 flcc (a regulated area). An additional stipulation in the construction standard is that a "competent person" at the asbestos removal demolition site must periodically examine clothing (worn by employees within negative pressure enclosures) for rips and tears, and mend/replace that clothing. A competent person is defined as an authority on site who identifies existing asbestos hazards and has authority to reduce/eliminate them, is trained formally in all aspects of abatement and removal procedures, supervises employee monitoring, personal protection, and understands and carries out provisions of the standard.