



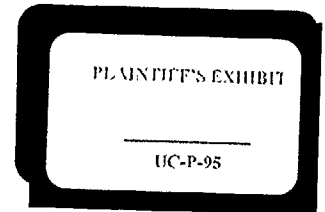
UNION CARBIDE CORPORATION
CHEMICALS AND PLASTICS
P. O. BOX 3370, BROWNSVILLE, TEXAS 78520

File Dr 1
Air
TACB coverage

March 20, 1980

Re: Asbestos Insulation
Removal

Mr. Cecil Bradford
Texas Air Control Board
8520 Shoal Creek Blvd.
Austin, TX 78758



Dear Mr. Bradford:

The attached notification, relative to the removal of friable asbestos insulation, is provided per requirement of 40 CFR 61, Subpart B, Section 61.22 (d).

Please contact the writer if there are any questions concerning information contained in the notification.

Very truly yours,

K. Gran Townsend

K. Gran Townsend

HB:mfw
Attachment

CC: Mr. Robert J. Guzman
Texas Air Control Board
Matz Bldg., 511-1/2 E. Jackson
Harlingen, TX 78550

BCC: R. C. Glock
M. L. Poor
L. T. Windel
J. L. Wyatt

DE 000084

Form of Notification

NOTICE OF INTENT TO DEMOLISH OR RENOVATE STRUCTURES, EQUIPMENT OR
PIPING INVOLVING FRIABLE ASBESTOS INSULATION

- (1) Name of Owner Union Carbide Corporation
- (2) Address of Owner P. O. Box 3370, Brownsville, TX 78520
- (3) Description of Facility A distillation column in solvent recovery
system from which approximately 50 sq. meters of insulation containing
asbestos will be removed
- (4) Address of Site Hy. 48, Port of Brownsville, Brownsville Navigation
District
- (5) Scheduled Start and Completion Dates 3/31/80 - 4/4/80
- (6) Nature of planned demolition or renovation and methods employed
Renovation of a distillation column by removal of old insulation
containing asbestos
- (7) Procedures employed The insulation will be removed wet and sealed
in labeled plastic bags
- (8) Name and address of disposal site Brownsville City Landfill,
Brownsville Navigation District
- (9) Agency ordering demolition NA

29-5-36



INTERNAL CORRESPONDENCE

KGT

UNION CARBIDE CORPORATION
COATINGS MATERIALS DIVISION

P. O. BOX 3370, BROWNSVILLE, TEXAS 78520

To (Name) H. D. Unland (3)
Company Brownsville Plant
Location

Date August 20, 1982

Originating Dept.

Answering letter date

Subject Safety and Health Inspection
of 529 AreaCopy to Plant Safety Inspection Team Members
Plant Safety Committee Members
OSHA Coordinators
A. L. Barefoot
S. J. Footer
R. C. Glock
W. W. McManus
Shift Coordinators (5)
Shift Supervisors (10)
K. A. Windhorst

At your request the Plant Safety and Health Inspection Team inspected the 529 area. The Team members performing the inspection were: A. B. Zarate, Instrument Mechanic; C. A. Swanson, Electrician; D. Porter, Rigger; Roy Garcia, Machinist; N. Bowling, Pipefitter; M. J. Suarez, Engineering; and R. Medrano, Operations. Some of the items that are listed in this inspection may already be covered by work orders, and some of the items may not seem to be safety or health related, but were considered worthy of mention by the Team members. The inspection notes of the Team members are as follows:

529 UNIT - GROUND LEVEL

1. The AUTHORIZED PERSONS ONLY sign on the E. door of the N. switchroom has fallen off.
2. The HEARING PROTECTION REQUIRED sign on the W. side of the N. switchroom is placed too high; it is hard to see.
3. There are numerous chains hanging from chain valves which are hard to see and present a head knock hazard.
4. MEK-DC solvent line from bottom of GSC kettle is taped with hazard black and white tape - needs retaping, tripping hazard.
5. Ladders at S. end of unit are stored on the ground about 10' away from their ladder rack.
6. About 10' of 3/4" tubing is hanging between #1 TC calandrias.
7. Insulation has fallen off on steam to MEKDC calandria.

DE 000087

529 UNIT - GROUND LEVEL (Cont'd)

8. Insulation is also needed on GSC kettle line.
9. Leaking valve and bushing on MEKRC tails pump.
10. Insulation needs attention on GSC tails kettle circulating pump.
11. 1" pipe to loop seal by #3 EAPC reflux pump needs brace.
12. Service water line from tank to pump suction is leaking.
13. Leaking valve on sample tap off #3 EAPC past make.
14. Fire extinguisher #410 N. of "A" condensate tank has a seal but no tie wrap around the hose.
15. SW of instrument air dryers there is 1/2" copper tubing leak coming off #2 TC tails DMV.
16. The following pumps - the drip pans are not hooked up to a floor drain and instead drain into the pad: #1 CC reflux pump and the EARC reflux pumps, N. & S. BRC bottoms pumps, #1 TC reflux pumps, N. & S. EADC reflux pumps, N. & S. MEKDC reflux pumps, N. & S. MEKDC bottoms pumps, N. & S. EARC bottoms pumps, #3 EAPC tails pumps.
17. There is a pipe leak on the vent header seal tank drain line.
18. N. 529 Autocall box is not painted red.
19. Conduit leaving the above box also not painted red.
20. N. of the N. switchroom there is an unused 1" pipe.
21. Unused large and small electrical cables at N. switchroom.
22. Trash on floor in N. switchroom.
23. Unused conduit and exposed wires in the W. end of the center switchrack and N. switchroom.
24. Choker hanging above lighting panel A-2.
25. There is an open 3/4" T conduit at the N. BRC bottoms pump motor.
26. Unused support on BRC tails cooler, head knock hazard.
27. Unlabeled switch handle missing on beam near Panel A-14.
28. There are several 110V outlets throughout the unit which are beyond safe use.
29. Trash in the S. switchroom.

529 UNIT - GROUND LEVEL (Cont'd)

30. Flanges, alipblinds and gaskets are not properly stored on the N. side of the unit.
31. Insulation is coming off from the suction line of #1 CC reflux pumps.
32. N. EARC tails pump pad is dirty with oil draining from oil mist drain.
33. N. & S. past make ANRC pumps drip pans are collecting leaking product and rusting the pump base.
34. Center Kinney strainer drive motor gear box is leaking gear oil.
35. Some dirt, sand and broken cement pieces are standing on E. side working back onto the unit floor. They could plug the pad drains.
36. Drain cover is rusted out at foot of #2 CC surge tank.
37. Some scaffolding has been erected that apparently is not being used.
38. N. & S. #3 EAPC tails pumps are running hot due to too much oil in bearing housing.
39. Hoses on ground S. of air dryers tripping hazard.

529 UNIT - 2nd LEVEL

1. Air hose laying along walkway by #2 CC not being used - tripping hazard.
2. The insulation has come off the ARC line, also wires hanging from the line at the elbow.
3. Gaskets, nuts and bolts and tubing scattered all around MEKDC column.
4. #2 AARC make DMV station needs support on N. end. It is resting on drain valve and the nipple is bent.
5. Conduit is falling apart W. of ANRC reflux tank.
6. Cooling water off of header on 3rd level going to 2nd level by MEKRC column is vibrating excessively. The hangers are loose.
7. Seawater valve leaking off of main header N. of BRC.
8. Open wire troughs and conduit fittings S. of old control room.
9. Open conduit fitting above ASC reflux DMV.
10. Open tees on W. wall of old control room.
11. Two 3/4" conduits need caps at the old control room.
12. Lighting conduit needs bracing below 3rd level S. of #2 CC.
13. Since steam traps are not insulated, some may require a wire guard to prevent someone from being burned.

529 UNIT - 2nd LEVEL

14. MEK leaking from valve W. of MEKRC.
15. There are gaskets and flanges left over from an old job around the MEKDC column.
16. A full 5-pint bottle of glacial acid and two empty unlabeled gallon jugs are in the old control room.
17. Old control room at S. end of 529 is built and covered with asbestos some of which is coming off and blowing away.
18. There is a piece of channel iron about 14' high by the ANRC reflux tank which is rusted out and about to fall on someone.
19. #2 CC reflux tank overflow pipe has a badly corroded hanger on last elbow to drain line.
20. There is no lead seal on extinguisher #176.
21. There is an improper hearing protection sign by BRC DMVs.
22. Step ladder by ANRC not being used.
23. Unused steel flex hose connected next to ANRC and lying on ground - tripping hazard.
24. Slipblinds, flanges and other fittings improperly stored on NW corner of the unit.

529 UNIT - 3rd LEVEL

1. Plywood, brooms, paper and other debris by N. handrail.
2. Water hose laying on ground not being used - tripping hazard, center of structure next to safety shower.
3. Deck grating E. of MEKRC is very loose.
4. EARC solvent cooler E. head is leaking.
5. E. of #1 TC there is a piece of grating which is 1-1/4" high while the rest of the grating is 1" - tripping hazard.
6. The EARC solvent cooler is not sitting properly in the saddle supports.
7. EADC has no PRV in process side of cooler.
8. #2 AARC past make cooler - the top one has no PRV on process side.
9. #3 EAPC vent condenser has no PRV.
10. Missing handle on lighting panel A-9.
11. SE of #2 CC junction box on beam - there is 1/2" conduit which is braced by wire.

August 20, 1982

529 UNIT - 3rd LEVEL (Cont'd)

12. Cover is missing from liquid flow gage on ARC.
13. There is some scaffolding which is apparently not being used.
14. I-beam, deck grating and other fixtures are badly stained and rusting due to old acid leak from above.
15. There is a leak on both ends of the MEKRC solvent cooler.

529 UNIT - 4th LEVEL

1. Switch SW of MEKDC not labeled.
2. On W. side of BRC the metal covering the insulation is coming loose.
3. EARC insulation was taken off to repair leak - insulation has not been replaced.

529 UNIT - 5th LEVEL

1. Instrument cable for BRC head pressure not properly secured.
2. Three instrument cables not properly secured by service drop on S. end of structure.
3. Safety showers and eye baths have insufficient flow.
4. #2 AARC vapor line - hanger supports are not holding up the vapor line.
5. #2 EAPC dp transmitter stand is not properly braced.
6. Grating SE of #2 AARC is excessively springy.
7. Conduit between #2 AARC and MEKRC not properly braced.

529 UNIT - 6th LEVEL

1. S. end of stairway is rusted - rusting is busting the nuts out of steel.
2. Safety showers and eye baths have insufficient flow.

529 UNIT - 3200 TANK FARM AREA

1. Switchrack A-2 N. of ASC reflux pumps - breaker cover is screwed in only a few threads.
2. Unlabeled plastic container with liquid by tank 3204.
3. Chemical spill E. side of tank 3235 not properly cleaned up.
4. Chemical spill W. side of tank 3202 not properly cleaned up.
5. 1" valve bonnet on tank 3312 is leaking.

DE 000091

August 20, 1987

529 UNIT - 3200 TANK FARM AREA (Cont'd)

6. The following tanks have no spring loaded gate at the top of the ladder: 3236, 3235, 3234, 3233, 3214, 3201, 3202, 3203 and 3204.
7. N. butyls transfer pump - concrete foundation is eaten away.
8. Starter rack A-3 needs new labels.
9. Starter rack A-3 - the breaker covers have many exposed threads.
10. Housekeeping around tanks 3260 and 3270.
11. Both pumps at tank 3235 need pigtail drains installed. Bearing housings are full of oil and the pumps are running hot.
12. There are two pumps and motors exposed to the atmosphere next to Bldg. 520.
13. Tank 3270 is not bolted to base.
14. Eye bath S. of tank 3270 has right side partially plugged.

HOUSEKEEPING

The Team rated the housekeeping in the area at 7.5.

If there are any questions, please contact this writer.


Mario Gutierrez for the
Plant Safety and Health
Inspection Team

MG:mfw

DE 000092

Louisiana Chemical Equipment Co., Inc.

Safety Awareness; Is your own personal responsibility be aware of your safety at all times as well as your co-workers safety as well.

Personal Safety Equipment; Hard hats, Safety Glasses, ~~safety shoes~~ and ~~splash goggles~~ shall be worn at all times

Asbestos Insulation; Insulation is to be handled in a wet state at all times no asbestos to be handled without the use of proper safety equipment. Area to be used for stripping is to be barricaded and properly marked, with warning signs. No one to enter asbestos removal area during stripping procedure without the proper safety equipment. All exposed insulation in stripping area shall be bagged and placed in the proper container at the end of the work day.

Safety Belts; Safety belts are provided for your own personal protection. Use them properly at all times when working on vessels in in baskets pipe racks or other elevated equipment. That do not have platforms and safety guard rails.

Accidents; Report all accidents to, your foreman or supervisor at once no matter how minor the accidents, so you can get medical attention or first aid services.

Ladders and scaffold; All ladders and scaffold are to be inspected on a regular bases. Do not use defective ladders or scaffolds. All ladders are to be tied off at the top when in use. Have a co-worker to hold the bottom of ladder while another ties the top. Make sure ladders are secure at bottom also. Scaffolds are to be properly constructed with guard rails and ladders.

Rigging; Use proper size cables and shackles for all rigging. Rigging equipment and pipe so that it will lift properly and safety. Use of tug lines are necessary for control and keeping a safe distance from loads. Do not

walk on work under any loads that are being lifted or moved. Inspect all cables and shackles for defects.

Fire Protection; Keep fire protection on jobsite at all times. Keep available nearby for use when needed.

Load Handling; Use proper rigging and proper size equipment for the size loads to be lifted. Keep all load free of loose objects that may fall and injure someone while lifting or moving loads. Use of tag lines are required on most all loads ~~moving equipment at~~
~~anytime~~

Plant Fire Alarms; Obey all plant fire and spill alarms shut down all hot work as quickly as possible. No hot work to be performed until plant has cleared plant site coordinator has o.k. hot work to continue.

Torch Safety- Use all torches and safety cutting equipment with extreme caution. Lines of safety values are required on all torches. Do not attempt to climb any ladders or scaffolds with a torch or cutting torch equipment in hand, use a rope to haul them up to where you are working. Use of gloves and eye protection are required when using any type of cutting equipment. Check hoses and fitting for leaks. Do not use grease or oil on any fitting or hoses.

Cylinder Storage - Store all cylinders not in use in a safe area in a upright position secured to prevent falling. Store Oxygen and flammable gases not in use in separate areas. Keep all cylinders in use away from work area to avoid dropping any sparks or the possibility of anything falling on cylinders.

Face Shields - Face shields and splash goggles are required use in some areas and performing some type of work. Such as busting concrete, using hammers and some types of power tools.

Crane or Pickers - All cranes to be inspected regularly. Inspect all cables and hooks for defects. Keep all safety latches in proper order. Check all pulley, rollers for free movement. Use outriggers and stabilizers when lifting loads. Check load charts to be sure load is not too heavy. No one to operate

equipment except qualified operators. Do not operate on lift loads near electrical lines.

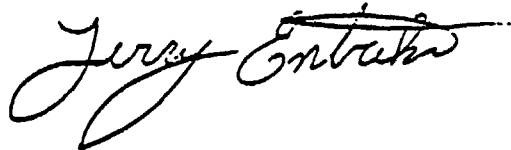
Lift Baskets - All baskets are to be plant certified. All baskets in use are to be rigged with safety cables. Safety belts to be use while in the basket. Basket gates are to have safety latches to prevent accidental opening.

Chockers and Shackles - Inspect all cables and shackles regularly for defects. Do not use if frayed or damaged. Always use proper size for the loads that you are working with.

Hammers - Use face shields when you are using hammers.

Housekeeping - Keep things in an neat and orderly manner as possible. Housekeeping is a key factor in safety.

Terry Entekin, Supervisor

A handwritten signature in cursive script, reading "Terry Entekin". The signature is written in dark ink and is positioned below the typed name.

BROWNSVILLE PLANT

VENDORS SAFETY INSTRUCTIONS

1. Matches and cigarette lighters are not allowed in the plant. Leave these items with the guard before you go into the plant.
2. Smoking in the plant is absolutely prohibited.
3. Permission and clearance must be obtained from operating personnel immediately prior to starting work.
4. The maximum plant speed limit is 20 MPH. In congested areas the speed limit is reduced to 5-15 MPH. Stop, warning or restriction, and safety signs will be followed.
5. Do not get off moving vehicles at any time. Riding on running boards, or having any part of the body extending outside truck bed is strictly forbidden. All riders must be seated.
6. Unauthorized personnel shall not congregate in the immediate area of a fire, explosion, etc. Vendors shall leave the area immediately in case of such an emergency.
7. Do not use unsafe tools. Ground all portable electric tools before using.
8. "Horseplay" in the plant will not be tolerated.
9. Hard hats and safety glasses must be worn at all times when you are in the manufacturing areas of the plant.
10. Drinking or the possession of liquor or habit forming drugs is prohibited on plant property. No one under their influence will be allowed to work.
11. Prohibited weapons, as defined by the Texas Penal Code, are not allowed in the plant.

GENERAL RULES

Vendors shall check with the guard at the main gate before entering or leaving the plant.

Vendors must always report incidents or accidents to the person responsible for bringing them in the plant. For instance, all fires, injuries, hazardous incidents, or potentially hazardous incidents must be reported.

Please detach, sign, and give to the guard:

I have read and understand the Brownsville Plant Vendors Safety Instructions.

SIGNATURE

DE 000098

SUBJECT: PLANT SAFETY RULES

I. PURPOSE:

To provide safety controls that will minimize personal injury and prevent damage to equipment. The rules apply to ALL personnel assigned to jobs in the plant.

II. POLICY:

It is impossible to list every hazard which might be encountered in an industrial plant. Therefore, safety restrictions are not limited to just the rules stated below. All employees must follow the safe practices or procedures given in written or oral job instructions. All safety requirements specified and published by the Employee's Department must be observed. .

Management requires all employees to use good judgment in the safe execution of their jobs. Violation of safety rules or failure to follow accepted safe practices or procedures will be cause for disciplinary action.

When secondary contractors or vendors are brought into the plant, it will be the responsibility of the Secondary Maintenance Contractor Coordinator or his designate to inform them of the general plant safety rules and regulations that are applicable to our plant operation. The Secondary Maintenance Contractor Coordinator or his designate will be accountable for issuing the prepared written copies of general plant safety instructions to the contractors or vendors and their employees. Each and every time a vendor or contractor enters the plant gate, the plant guard shall stop the individual and ask that all matches or cigarette lighters be left at the gate. Contractors and vendors must always report incidents or accidents to the person responsible for

DE 000099

SUBJECT: PLANT SAFETY RULES

II. POLICY: (Continued)

bringing them in the plant. For instance, all fires, injuries, hazardous incidents, or potentially hazardous incidents must be reported.

III. RULES: GENERAL

1. Matches or cigarette lighters are not allowed in the plant.
2. Smoking in the plant is prohibited. Violators are subject to immediate discharge. For purposes of this policy, Building #259, is not construed to be in the plant.
3. Clarity and speed of all communications are vital to the safe and efficient operation of the plant. It is in this interest that only English be utilized in oral and written communications during working hours.
4. Horseplay in the plant will not be tolerated.
5. The maximum plant speed limit is 20 MPH. In congested areas the speed limit is reduced to 5 - 15 MPH. Stop, warning or restriction, and safety signs will be followed.
6. Do not get off moving vehicles at any time. Riding on running boards, or having any part of the body extending outside truck bed is strictly forbidden. All riders must be seated.
7. Operation of internal combustion engines, use of spark producing tools, welding, cutting, or the use of any tool or machine which might, through its operation produce a spark or flame, will not be permitted within the operating areas without specific approval of the operating personnel (may require properly executed HWP).
The work done by the secondary contractor or vendor will be subject

DE 000100

SUBJECT: PLANT SAFETY RULES

III. RULES: GENERAL (Continued)

7. (Continued)
to the restrictions on the Hazardous Work Permit, and no changes will be allowed unless the permit is rewritten. The Hazardous Work Permit must remain posted at the job site throughout the duration of the work covered by the permit.
8. Report all injuries immediately.
9. Secondary contractors and vendors shall check with the guard at the main gate before entering or leaving the plant.
10. In addition to the above requirements, secondary contractors and their personnel shall be responsible for any particular requirements so specified within their work contract.
11. Drinking, or the possession of liquor or habit-forming drugs is prohibited on plant property. No one under their influence will be allowed to work.
12. Prohibited weapons, as defined by the Texas Penal Code, are not allowed in the plant.

IV. SAFETY EQUIPMENT:

1. Spectacle type safety glasses must be worn at all times while you are in the plant with the exception of offices. For purposes of this policy, employees will not be required to wear safety glasses when reporting to or leaving from work. Contact lens will not be worn in the plant. Special goggles provided must be worn where called for in instructions, written or oral.
2. Hard hats must be worn at all times while you are in the plant, except in offices, and when reporting to or leaving from work.

DE 000101

SUBJECT: PLANT SAFETY RULES

IV. SAFETY EQUIPMENT: (Continued)

3. Employees are encouraged to wear safety shoes. Employees who choose not to wear safety shoes shall wear shoes that comply with the following:
 - a. Shoes shall have a flexible sole.
 - b. Shoes shall have a heel height not to exceed 3" measured vertically from inside the heel.
 - c. Material of construction for shoes worn when working in the laboratory and in Manufacturing areas * of the plant shall be leather or man-made material that provides equal protection.
 - d. Moccasins, open toe shoes or canvas sneakers shall not be worn when working in the laboratory and manufacturing areas * of the plant.
4. Do not wear loose clothing around moving machinery. Shirts with sleeves (minimum length, standard short or half) will be worn at all times while in the plant.
5. Hearing protection must be worn at all times if you work in areas specified as noise areas.

EXHIBIT B

TERMS AND CONDITIONS

1. CONTRACTOR'S EXAMINATION - CONTRACTOR/AND OR SUBCONTRACTOR WILL BE HELD TO HAVE EXAMINED THE AGREEMENT OF THE WORK TO BE PERFORMED, EXHIBIT A, EXHIBIT B, AND THE SITE OF THE WORK BEFORE SIGNING THIS AGREEMENT AND TO BE SATISFIED AS TO THE CONDITIONS UNDER WHICH CONTRACTOR/AND OR SUBCONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING THE WORK, INCLUDING BUT NOT LIMITED TO ABOVEGROUND OBSTRUCTIONS, THE CHARACTER AND NATURE OF THE WORK, SAFETY REGULATIONS AND ALL OTHER CONSIDERATIONS WHICH MAY AFFECT THE WORK IN ANY MANNER.
2. WARRANTIES - CONTRACTOR/AND OR SUBCONTRACTOR WARRANTS THAT ALL MATERIALS AND EQUIPMENT INCORPORATED INTO THE RESULTS OF THE WORK (EXCEPT MATERIALS AND EQUIPMENT PROVIDED BY THE OWNER) AND EVERY PORTION OF THE WORK SHALL CONFORM TO THE TERMS OF THIS AGREEMENT AND THE TERMS OF EXHIBIT A AND EXHIBIT B, SHALL BE OF THE BEST QUALITY, SHALL BE FIT FOR THE PARTICULAR PURPOSE FOR WHICH THEY ARE REQUIRED, AND SHALL BE FREE OF ALL DEFECTS IN THE MATERIALS AND WORKMANSHIP.
3. SUBCONTRACTS - CONTRACTOR SHALL NOT SUBCONTRACT ANY PORTION OF THE WORK WITHOUT THE CONSENT OF THE OWNER.
4. LIENS - CONTRACTOR/AND OR SUBCONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS OWNER AND ANY PARTY HAVING AN INTEREST IN A SITE WHERE ANY PORTION OF THE WORK IS BEING PERFORMED FROM LABORERS, MECHANICS, MATERIALMEN'S LIENS AND ALL OTHER LIENS AND CHARGES UPON THE WORK/AND OR UPON THE SITE OF THE WORK PERFORMED AND/OR MATERIALS OR EQUIPMENT FURNISHED BY CONTRACTOR OR BY A SUBCONTRACTOR HEREUNDER.
5. WASTE MATERIALS - CONTRACTOR SHALL NOT ALLOW WASTE MATERIALS OR RUBBISH TO ACCUMULATE IN OR ABOUT THE SITE OF THE WORK, BUT SHALL REMOVE THE SAME PROMPTLY AS OWNER DIRECTS.

EXHIBIT 3

TERMS AND CONDITIONS (CONT'D)

6. SAFETY - CONTRACTOR/AND OR SUBCONTRACTOR SHALL COMPLY WITH AND SHALL CAUSE ITS EMPLOYEES AND ALL SUBCONTRACTORS TO ABIDE BY ALL HEALTH, SAFETY AND SECURITY RULES AND REGULATIONS IN FORCE AT THE SITE OF THE WORK.
7. INSURANCE - CONTRACTOR/AND OR SUBCONTRACTOR SHALL AT ITS EXPENSE PROVIDE AND MAINTAIN WORKMEN'S COMPENSATION INSURANCE TO THE EXTENT REQUIRED BY LAW AND CONTRACTOR'S BODILY INJURY LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE (INCLUDING CONTRACTURAL LIABILITY COVERING THE INDEMNITY SET FORTH IN PARAGRAPH 8 BELOW) IN AMOUNTS APPROVED BY THE OWNER. CONTRACTOR/AND OR SUBCONTRACTOR SHALL FURNISH TO OWNER WRITTEN CERTIFICATES ESTABLISHING THAT THE ABOVE INSURANCE HAS BEEN PROVIDED AND IS BEING MAINTAINED.
8. INDEMNITY PHYSICAL DAMAGE RESPONSIBILITY - CONTRACTOR/AND OR SUBCONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS OWNER, ITS EMPLOYEES, AGENTS AND SUBSIDIARIES, FROM AND AGAINST ALL CLAIMS, LIABILITIES, LOSSES, DAMAGES, AND EXPENSES OF EVERY CHARACTER WHATSOEVER, FOR BODILY INJURY, SICKNESS AND/OR DISEASE, INCLUDING DEATH AT ANY TIME RESULTING FROM SUCH BODILY INJURY, SICKNESS AND/OR DISEASE, SUSTAINED BY ANY PERSON (INCLUDING BUT NOT LIMITED TO EMPLOYEES OF OWNER, OF CONTRACTOR, OR OF A SUBCONTRACTOR), IF OR WHERE SUCH INJURY, SICKNESS, DISEASE AND/OR DEATH AROSE OUT OF OR WAS IN ANY WAY CONNECTED WITH THE WORK, OR WITH THE PERFORMANCE OF OR FAILURE TO PERFORM THE WORK, OR WITH THE PRESENCE OF SUCH PERSON ON THE PREMISES OF OWNER OR THE SITE OF THE WORK. TO THE EXTENT VALID AND ENFORCEABLE UNDER APPLICABLE LAW, THE AFORESAID OBLIGATION TO DEFEND, INDEMNIFY AND HOLD HARMLESS SHALL INCLUDE, WITHOUT LIMITATION, INJURIES, SICKNESS, DISEASE AND/OR DEATH CAUSED BY RESULTING FROM OR IN ANY WAY CONNECTED WITH THE NEGLIGENCE, IN WHOLE OR IN PART, OF OWNER, ITS EMPLOYEES, AGENTS OR SUBSIDIARIES IN THE EVENT THAT THIS AGREEMENT PROVIDES FOR THE WORK TO BE PERFORMED ON PROPERTY OWNED OR CONTROLLED BY ANY PARTY OR PARTIES, THEIR EMPLOYEES AND AGENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR, AND HEREBY ASSUMES ALL LIABILITY FOR LOSS OR DESTRUCTION OF, OR DAMAGE TO, ALL TOOLS, MACHINERY, EQUIPMENT AND APPLIANCES OWNED BY CONTRACTOR, OR LOANED OR LEASED TO CONTRACTOR BY OTHER THAN OWNER AND ALL PERSONAL

DE 000104

8. INDEMNITY PHYSICAL DAMAGE RESPONSIBILITY (CONT'D)

PROPERTY OF CONTRACTOR'S EMPLOYEES. TO THE EXTENT VALID AND ENFORCE-
ABLE UNDER APPLICABLE LAW, THE AFORESAID RELIEF FROM RESPONSIBILITY AND
LIABILITY SHALL INCLUDE LOSS, DESTRUCTION OR DAMAGE CAUSED BY, ARISING
OUT OF, OR IN ANY WAY CONNECTED WITH THE NEGLIGENCE, IN WHOLE, OR IN
PART OF OWNER, ANY PARTY OWNING OR CONTROLLING PROPERTY ON WHICH ANY
PORTION OF THE WORK IS BEING PERFORMED, OR ANY OF THEIR EMPLOYEES
AGENTS OR SUBSIDIARIES.

9. LABOR - CONTRACTOR/AND OR SUBCONTRACTOR SHALL EMPLOY, OR CAUSE TO BE
EMPLOYED, ON OR IN CONNECTION WITH THE PERFORMANCE OF THE WORK, ONLY
PERSONS WHO ARE FIT AND SKILLED IN THE WORK ASSIGNED. SHOULD ANY
DISORDERLY INCOMPETENT, OR OBJECTIONABLE PERSON BE EMPLOYED ON THE
WORK BY CONTRACTOR OR BY ANY OF ITS SUBCONTRACTORS, CONTRACTOR SHALL,
UPON REQUEST OF OWNER, CAUSE SUCH PERSON TO BE REMOVED FROM THE WORK.



UNION CARBIDE CORPORATION
COATINGS MATERIALS DIVISION
Star Route Box 90
Brownsville, Texas 78521

UPON THE TERMS HEREIN CONTAINED "OWNER" (UNION CARBIDE) AGREES THAT CONTRACTOR AND OR ANY SUBCONTRACTOR HIRED BY CONTRACTOR WILL PERFORM THE WORK DESCRIBED BELOW IN ACCORDANCE WITH ALL SAFETY PROCEDURES SPECIFIED UNDER EXHIBIT A AND ALL THE TERMS AND CONDITIONS SPECIFIED UNDER EXHIBIT B. CONTRACTOR SHALL FURNISH AT ITS COST AND EXPENSE ALL LABOR, MATERIALS, TOOLS, MACHINERY, EQUIPMENT, APPLIANCES, SHORING, SCAFFOLDING, FALSE WORK, TRANSPORTATION, SAFETY EQUIPMENT, AND ALL OTHER THINGS NECESSARY FOR THE PERFORMANCE OF THE "WORK":

1. PHYSICAL ENTRY INTO FIVE (5) TANKS:

BUTANE FEED TANK	6392-260 (RX #2)
HIGH PRESSURE CO ₂ TANKS	6392-214 (RX #1 S)
	6392-215 (RX #1 N)
	6392-315 (RX #2 W)
	6392-316 (RX #2 E)

TO PERFORM THE FOLLOWING TESTS:

- X-RAY
- THICKNESS
- DYE CHECK
- ALLOY VERIFICATION
- VISUAL

2. INSPECTION OF TWO (2) DECANter COOLERS (HEAT EXCHANGERS)

DECANter COOLER	6376-619 (RX #2)
DECANter COOLER	6376-620 (RX #2)

3. INSPECTION OF ONE (1) PRODUCT COOLER (HEAT EXCHANGER)

PRODUCT COOLER	6376-621 (RX #1)
----------------	------------------

DE 000106

4. TANKS AND HEAT EXCHANGERS WILL BE ISOLATED. LINES WILL BE EITHER SLIP BLINDED OR OPENED.

5. HEAT EXCHANGERS - HEADS WILL BE REMOVED. BUNDLES WILL BE PARTIALLY PULLED TO TEST THE TUBE SHEET ON EITHER SIDE.

A CURRENT CERTIFICATE OF INSURANCE MUST BE PROVIDED BY THE CONTRACTOR AND OR ANY SUBCONTRACTOR HIRED BY THE CONTRACTOR AS LONG AS THE ABOVE MENTIONED WORK IS BEING PERFORMED. CONTRACTOR AND OR SUBCONTRACTOR TO HAVE INSURANCE COVERAGE OF MINIMUM \$100,000 PROPERTY DAMAGE LIABILITY, \$300,000 BODILY INJURY LIABILITY PER PERSON, AND \$500,000 BODILY INJURY LIABILITY PER OCCURRENCE.

CONTRACTOR AND OR SUBCONTRACTOR SHALL ABIDE BY ALL PLANT SAFETY RULES AND CONTRACTOR'S SAFETY RULES IN FORCE IN OWNER'S BROWNSVILLE, TEXAS PLANT. EXHIBIT A ATTACHED.

Charles W. Roman 5/20/88 EX-100V Brian Carter 5-20-88
CONTRACTOR UNION CARBIDE CORPORATION DATE

W. J. Schuch FISH E. C. INC.
SUB-CONTRACTOR
Alan H. Hays Lindberg Inspection Corp.

APPROVED BY FRED CONE PER TELEPHONE CONVERSATION ON MAY 19, 1988

EXHIBIT B

TERMS AND CONDITIONS

1. CONTRACTOR'S EXAMINATION - CONTRACTOR/AND OR SUBCONTRACTOR WILL BE HELD TO HAVE EXAMINED THE AGREEMENT OF THE WORK TO BE PERFORMED, EXHIBIT A, EXHIBIT B, AND THE SITE OF THE WORK BEFORE SIGNING THIS AGREEMENT AND TO BE SATISFIED AS TO THE CONDITIONS UNDER WHICH CONTRACTOR/AND OR SUBCONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING THE WORK, INCLUDING BUT NOT LIMITED TO ABOVEGROUND OBSTRUCTIONS, THE CHARACTER AND NATURE OF THE WORK, SAFETY REGULATIONS AND ALL OTHER CONSIDERATIONS WHICH MAY AFFECT THE WORK IN ANY MANNER.
2. WARRANTIES - CONTRACTOR/AND OR SUBCONTRACTOR WARRANTS THAT ALL MATERIALS AND EQUIPMENT INCORPORATED INTO THE RESULTS OF THE WORK (EXCEPT MATERIALS AND EQUIPMENT PROVIDED BY THE OWNER) AND EVERY PORTION OF THE WORK SHALL CONFORM TO THE TERMS OF THIS AGREEMENT AND THE TERMS OF EXHIBIT A AND EXHIBIT B, SHALL BE OF THE BEST QUALITY, SHALL BE FIT FOR THE PARTICULAR PURPOSE FOR WHICH THEY ARE REQUIRED, AND SHALL BE FREE OF ALL DEFECTS IN THE MATERIALS AND WORKMANSHIP.
3. SUBCONTRACTS - CONTRACTOR SHALL NOT SUBCONTRACT ANY PORTION OF THE WORK WITHOUT THE CONSENT OF THE OWNER.
4. LIENS - CONTRACTOR/AND OR SUBCONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS OWNER AND ANY PARTY HAVING AN INTEREST IN A SITE WHERE ANY PORTION OF THE WORK IS BEING PERFORMED FROM LABORERS, MECHANICS, MATERIALMEN'S LIENS AND ALL OTHER LIENS AND CHARGES UPON THE WORK/AND OR UPON THE SITE OF THE WORK PERFORMED AND/OR MATERIALS OR EQUIPMENT FURNISHED BY CONTRACTOR OR BY A SUBCONTRACTOR HEREUNDER.
5. WASTE MATERIALS - CONTRACTOR SHALL NOT ALLOW WASTE MATERIALS OR RUBBISH TO ACCUMULATE IN OR ABOUT THE SITE OF THE WORK, BUT SHALL REMOVE THE SAME PROMPTLY AS OWNER DIRECTS.

EXHIBIT B

TERMS AND CONDITIONS (CONT'D)

6. SAFETY - CONTRACTOR/AND OR SUBCONTRACTOR SHALL COMPLY WITH AND SHALL CAUSE ITS EMPLOYEES AND ALL SUBCONTRACTORS TO ABIDE BY ALL HEALTH, SAFETY AND SECURITY RULES AND REGULATIONS IN FORCE AT THE SITE OF THE WORK.
7. INSURANCE - CONTRACTOR/AND OR SUBCONTRACTOR SHALL AT ITS EXPENSE PROVIDE AND MAINTAIN WORKMEN'S COMPENSATION INSURANCE TO THE EXTENT REQUIRED BY LAW AND CONTRACTOR'S BODILY INJURY LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE (INCLUDING CONTRACTURAL LIABILITY COVERING THE INDEMNITY SET FORTH IN PARAGRAPH 8 BELOW) IN AMOUNTS APPROVED BY THE OWNER. CONTRACTOR/AND OR SUBCONTRACTOR SHALL FURNISH TO OWNER WRITTEN CERTIFICATES ESTABLISHING THAT THE ABOVE INSURANCE HAS BEEN PROVIDED AND IS BEING MAINTAINED.
8. INDEMNITY PHYSICAL DAMAGE RESPONSIBILITY - CONTRACTOR/AND OR SUBCONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS OWNER, ITS EMPLOYEES, AGENTS AND SUBSIDIARIES, FROM AND AGAINST ALL CLAIMS, LIABILITIES, LOSSES, DAMAGES, AND EXPENSES OF EVERY CHARACTER WHATSOEVER, FOR BODILY INJURY, SICKNESS AND/OR DISEASE, INCLUDING DEATH AT ANY TIME RESULTING FROM SUCH BODILY INJURY, SICKNESS AND/OR DISEASE, SUSTAINED BY ANY PERSON (INCLUDING BUT NOT LIMITED TO EMPLOYEES OF OWNER, OF CONTRACTOR, OR OF A SUBCONTRACTOR), IF OR WHERE SUCH INJURY, SICKNESS, DISEASE AND/OR DEATH AROSE OUT OF OR WAS IN ANY WAY CONNECTED WITH THE WORK, OR WITH THE PERFORMANCE OF OR FAILURE TO PERFORM THE WORK, OR WITH THE PRESENCE OF SUCH PERSON ON THE PREMISES OF OWNER OR THE SITE OF THE WORK. TO THE EXTENT VALID AND ENFORCEABLE UNDER APPLICABLE LAW, THE AFORESAID OBLIGATION TO DEFEND, INDEMNIFY AND HOLD HARMLESS SHALL INCLUDE, WITHOUT LIMITATION, INJURIES, SICKNESS, DISEASE AND/OR DEATH CAUSED BY RESULTING FROM OR IN ANY WAY CONNECTED WITH THE NEGLIGENCE, IN WHOLE OR IN PART, OF OWNER, ITS EMPLOYEES, AGENTS OR SUBSIDIARIES IN THE EVENT THAT THIS AGREEMENT PROVIDES FOR THE WORK TO BE PERFORMED ON PROPERTY OWNED OR CONTROLLED BY ANY PARTY OR PARTIES, THEIR EMPLOYEES AND AGENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR, AND HEREBY ASSUMES ALL LIABILITY FOR LOSS OR DESTRUCTION OF, OR DAMAGE TO, ALL TOOLS, MACHINERY, EQUIPMENT AND APPLIANCES OWNED BY CONTRACTOR, OR LOANED OR LEASED TO CONTRACTOR BY OTHER THAN OWNER AND ALL PERSONAL

8. INDEMNITY PHYSICAL DAMAGE RESPONSIBILITY (CONT'D)

PROPERTY OF CONTRACTOR'S EMPLOYEES. TO THE EXTENT VALID AND ENFORCE-
ABLE UNDER APPLICABLE LAW, THE AFORESAID RELIEF FROM RESPONSIBILITY AND
LIABILITY SHALL INCLUDE LOSS, DESTRUCTION OR DAMAGE CAUSED BY, ARISING
OUT OF, OR IN ANY WAY CONNECTED WITH THE NEGLIGENCE, IN WHOLE, OR IN
PART OF OWNER, ANY PARTY OWNING OR CONTROLLING PROPERTY ON WHICH ANY
PORTION OF THE WORK IS BEING PERFORMED, OR ANY OF THEIR EMPLOYEES
AGENTS OR SUBSIDIARIES.

9. LABOR - CONTRACTOR/AND OR SUBCONTRACTOR SHALL EMPLOY, OR CAUSE TO BE
EMPLOYED, ON OR IN CONNECTION WITH THE PERFORMANCE OF THE WORK, ONLY
PERSONS WHO ARE FIT AND SKILLED IN THE WORK ASSIGNED. SHOULD ANY
DISORDERLY INCOMPETENT, OR OBJECTIONABLE PERSON BE EMPLOYED ON THE
WORK BY CONTRACTOR OR BY ANY OF ITS SUBCONTRACTORS, CONTRACTOR SHALL,
UPON REQUEST OF OWNER, CAUSE SUCH PERSON TO BE REMOVED FROM THE WORK.