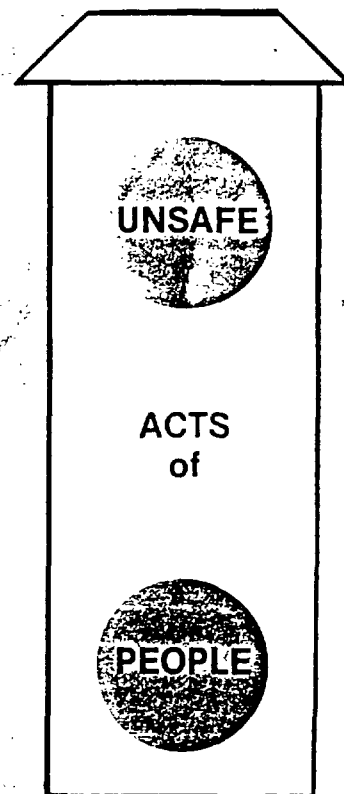


SAFETY
TRAINING
OBSERVATION
PROGRAM

FOR
NON-SUPERVISORY
PERSONNEL

UNIT II
Personal Protective
Equipment and
Positions of People



S-T-O-P FOR NON-SUPERVISORY PERSONNEL
(A Safety Training Observation Program)

UNIT II

~~INTRODUCTION~~
*PERSONAL PROTECTIVE EQUIPMENT
AND
POSITIONS OF PEOPLE*

A special thanks to:

Duffey O'Briant, Insulator

and

Allen Tovrea, Department 33 Chief Operator

for helping to develop this training program.

This training program was developed especially for Monsanto,
Texas City Plant based on S-T-O-P materials purchasd from
E.I. DuPont de Nemours & Co., Wilmington, Delaware 19898.

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UNIT II
PERSONAL PROTECTIVE EQUIPMENT
AND
POSITIONS OF PEOPLE

Remove the perforated Answer Sheet from the back of this booklet.

Complete the statements or circle your answer, and then check the Answer Sheet to make sure you are right.

Your objective in this course is to become a:

- Safety Supervisor
- Skilled Safe Worker
- Average Worker (8)

The objective of the STOP training program is to *eliminate injuries and incidents* in your area by helping you to *eliminate the Unsafe Acts and Unsafe Conditions*.

What percent of the major and submajor injuries are caused by unsafe

acts? _____ (4)

If you eliminate the Unsafe Acts in your area, you eliminate

the _____ and _____ (9)

Before you can eliminate the unsafe acts in your area, you must first:

- take an examination
- recognize and correct them
- object to them (1)

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A skilled safe worker eliminates injuries to himself by observing and thinking about the job to be done, and then by taking action to stop the

_____ and

_____ (11)

In the same way, you can say that your objective in this course is to eliminate

_____ and _____ by becoming a skilled safe worker. (18)

A skilled safe worker uses a Safety Cycle to avoid unsafe acts. The steps in the Safety Cycle are:



Each word in the Safety Cycle is a key word that describes one of the Techniques used by a skilled safe worker. In this course, you will learn and apply these Techniques.

Use the words in the Safety Cycle above to complete this statement:

A skilled safe worker first _____ to work safely, then _____ in order to effectively _____ for possible unsafe conditions, and _____ about possible unsafe acts. He then _____ to do his job safely. (6)

When using the Safety Cycle, the skilled safe worker knows that each word refers to certain _____ he uses. (2)

Your objective in this course is to eliminate _____ to yourself by _____ about unsafe acts. (13)

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Who is *most* responsible for protecting *you* against *your own* unsafe acts?

- I am.
- My supervisor is.
- My coworker is. (3)

One of the Techniques of a skilled safe worker is to pay *equal* attention, provide *equal* effort, and give *equal* importance to safety, as he gives to production, quality, and cost.

If you are going to be a Safe Worker in your area, you can apply the Technique of

making safety _____ to quality, _____, and _____ (14)

Would you say that, as a nonsupervisory employee, you are paid to be equally responsible, and are held accountable, for safety, quality, cost, and production?

Yes/No (5)

~~Your supervisor, who has taken this training program, will inspect your area with you each week. In addition, he will review your SAFETY CYCLE REPORTS with you.~~

~~Who will inspect your area with you each week?~~

- ~~- My Supervisor~~
- ~~- The Safety Committee (16)~~

~~What will be reviewed with you on this weekly inspection?~~

- ~~- Personal Problems~~
- ~~- Safety Cycle Reports (7)~~

~~After you begin making safety observations, how many Safety Cycle (STOP) cards will you turn in to your supervisor?~~

- ~~- one each day~~
- ~~- one each week~~
- ~~- one for every unsafe act or condition observed (17)~~

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment is used as a barrier between a person and a hazard. Its main purpose is to eliminate injury by avoiding any unnecessary exposure to the hazard. Some hazards cannot be eliminated. Working in a chemical unit under structures where work may be occurring above exposes one to potential hazards, and not wearing a hard hat is an unnecessary exposure which can be avoided. With some hazards only special Personal Protective Equipment can avoid unnecessary exposure.

The various kinds of Personal Protective Equipment can be grouped according to the particular body parts being protected.

The seven general parts of the body that are protected by Personal Protective Equipment are:

Eyes and Face	Hands and Arms
Ears	Respiratory System
Head	Feet and Legs
Trunk	

One way to prevent injury by eliminating any unnecessary exposure to hazards is to be sure the people in your area of responsibility wear:

21 5
(47)

People wear Personal Protective Equipment to _____

_____ by avoiding _____

to hazards.

20
(34) 10

Match the gloves we have in Safety Supply with their intended use:

A. Cotton Gloves	_____ Laboratory Work
B. Thermal Gloves	_____ Work on distillation tower trays
C. Sandpaper Gloves	_____ For high temperature protection
D. Vinyl Coated Gloves	_____ For welding
E. Playtex and Rubber Gloves	_____ Sampling chemicals, turning valves, etc.

17
2
(36)

Cloth gloves provide little or no protection against chemicals. Therefore, wearing cloth gloves when sampling chemicals in our plant is an unnecessary exposure to chemical contact.

What special gloves should be worn when sampling chemicals?

12
(49)

Sleevelets or long sleeves are required in the Phthalic Anhydride unit to protect against:

- Chemical fumes
- Burns from molten PA (steam (hot) lines)
- Sharp edges on equipment

16
(50)

When you have a brief job to do in a toxic or nitrogen atmosphere it is permissible to use the 5-minute escape masks.

True / False

7
(52)

If you are just passing through a cover goggle area there is no need to wear your goggles.

True / False

15
(51)

Why are plastic hard hats more safe than metal hats?

21
(55)

It is okay to enter a tank filled with nitrogen if you have a fresh air mask or a Scott air pack on properly.

True / False

27
(48)

STOP UNSAFE ACTS

OBSERVATION CHECK LIST

DECIDE STOP ACT REPORT

OBSERVE

Unsafe Acts Cause 96% Of The Major And Sub-Major Injuries

PERSONAL PROTECTIVE EQUIPMENT

- ☐ Eyes And Face
- ☐ Ears
- ☐ Head
- ☐ Hands And Arms
- ☐ Feet And Legs
- ☐ Respiratory System
- ☐ Trunk

POSITIONS OF PEOPLE

- ☐ Striking Against ☐ Struck By
- ☐ Caught Between
- ☐ Falling
- ☐ Temperature Extremes
- ☐ Electric Current
- ☐ Inhaling ☐ Absorbing ☐ Swallowing
- ☐ Overexertion

ACTIONS OF PEOPLE

- ☐ Adjusting Personal Protective Equip.
- ☐ Changing Position
- ☐ Rearranging Job
- ☐ Stopping Job
- ☐ Attaching Grounds ☐ Lockouts

TOOLS AND EQUIPMENT

- ☐ Right For The Job
- ☐ Used Correctly
- ☐ In Safe Condition

PROCEDURES AND ORDERLINESS

- ☐ Adequate (Reviewed And Upgraded)
- ☐ Established (Understood)
- ☐ Maintained

You are one of two operators in our Acrylonitrile unit going out to take a sample of AN. You are going to back up the other operator who is to take the sample. As he gets ready to sample you notice that he is wearing only one chemically resistant glove. You stop him from proceeding and ask why he is wearing only one glove. He said he had two gloves, but one must have dropped out of his pocket on the way from the control room.

Please fill out the STOP Observation Card on this page.

(57)

35

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STOP UNSAFE ACTS

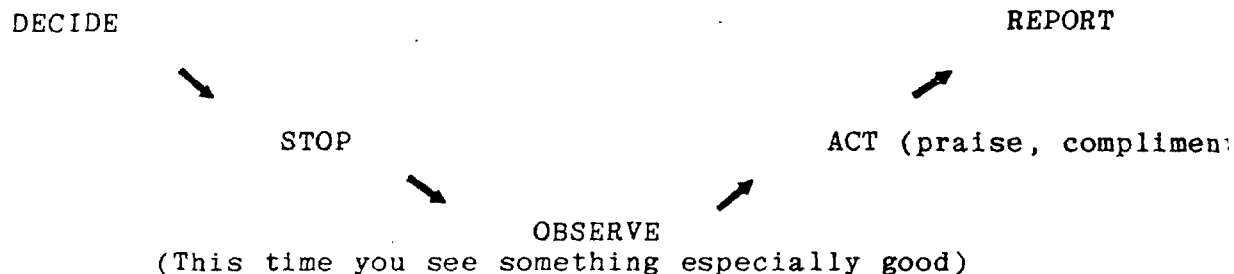
OBSERVATION REPORT

Unsafe Acts Observed	Action Taken

Name _____

Date _____

Most of our people do things right most of the time. Occasionally, you will see people really go out of their way to do a lot of things right so a job can be done safely. When they do they deserve positive recognition for SAFE ACTS. One of the best ways to encourage SAFE ACTS is to follow the same procedure as when looking for unsafe acts.



The difference comes in what you do when you see the job being done safely. Then you say,

"I see that you have recognized the hazards of this job (stating what they are) and have taken the necessary actions to prevent accidents and injury. I like to see SAFE ACTS like that. Keep up the good work."

Then when you fill out the STOP report card cross out UNSAFE and write in SAFE ACT OBSERVED.

By using the TECHNIQUES of a skilled observer you can reinforce STANDARDS by positive comments about SAFE PERFORMANCE.

After you have discussed this with the persons doing the job they will be more likely to do the job _____ when you are not around.

(58)
42

You will be regarded as a ^{AN} ~~Chief/Leadman~~ OPERATOR who:

- is concerned about the safety of the people on his shift.
- has high STANDARDS of safe performance.
- is a skilled observer.

Positive reinforcement of SAFETY STANDARDS occurs when you _____ SAFE ACTS and make positive comments to the safe workers.

(38)
19

STOP UNSAFE ACTS

OBSERVATION CHECK LIST

DECIDE

STOP

ACT

REPORT

OBSERVE

Unsafe Acts Cause 96% Of The Major And Sub-Major Injuries

PERSONAL PROTECTIVE EQUIPMENT

- ☐ Eyes And Face
- ☐ Ears
- ☐ Head
- ☐ Hands And Arms
- ☐ Feet And Legs
- ☐ Respiratory System
- ☐ Trunk

POSITIONS OF PEOPLE

- ☐ Striking Against ☐ Struck By
- ☐ Caught Between
- ☐ Falling
- ☐ Temperature Extremes
- ☐ Electric Current
- ☐ Inhaling ☐ Absorbing ☐ Swallowing
- ☐ Overexertion

ACTIONS OF PEOPLE

- ☐ Adjusting Personal Protective Equip.
- ☐ Changing Position
- ☐ Rearranging Job
- ☐ Stopping Job
- ☐ Attaching Grounds ☐ Lockouts

TOOLS AND EQUIPMENT

- ☐ Right For The Job
- ☐ Used Correctly
- ☐ In Safe Condition

PROCEDURES AND ORDERLINESS

- ☐ Adequate (Reviewed And Upgraded)
- ☐ Established (Understood)
- ☐ Maintained

You are a Chief Pumper Gauger and you are out checking jobs in your area. of responsibility. You come across the ACY tank car loading job and you observe the following:

Pumper Gaugers in the process of loading ACY tank cars with derail installed, STOP TANK CAR CONNECTED sign in place, cover goggles signs in place and uncovered, area barricaded, cars chocked and grounded, radio communications established, and all proper safety equipment being worn.

Please fill out the STOP Observation Card on this page.

(59)

31

SC

10625

STOP UNSAFE ACTS

OBSERVATION REPORT

Unsafe Acts Observed	Action Taken

Name _____

Date _____

POSITIONS OF PEOPLE

A skilled observer looks at the positions of people for unsafe acts that could result in injury if the unexpected happens. Knowing the Injury Causes, you can better evaluate the positions and activities of people.

Using the injury causes, you can foresee and correct situations that could result in injury if the _____ (39)

36

Listed below are the injury causes used by a skilled observer in evaluating the positions and activities of people.

INJURY CAUSES

Striking against or being struck by objects

Caught in, on, or between objects

Falling at the same level

Falling to a different level

Contact with temperature extremes or electric current

Inhaling, absorbing through the skin, or swallowing harmful material

Overexertion while lifting, pulling, pushing, or reaching

Complete the injury causes on the Safety Observation Card on the facing page.

You can foresee and correct situations that could result in injury if the unexpected happens when you evaluate the positions and activities of people by using the _____ on the Safety Observation Card as a guide. 44 (45)

SC

10626

EXAMPLES OF INJURY CAUSES

Use the card on facing page.

A machinist was on a ladder working on the side of a machine. While loosening a nut, his wrench slipped and he skinned his knuckles.

You would say that he was injured by _____
 _____ an object. (34)
 24

The wrench fell, injuring another man working below. You would say that he was injured by being _____
 _____ an object. (28)
 32

A pipefitter was preparing to bolt a pipe flange supported by a crane when the pipe slipped crushing his hand between the two flanges.

He was injured by being _____ objects. (42)
 28

The operator apprentice running to his assistance, tripped and was injured by _____ the same level. (30)
 20

A man standing on the top of a step ladder lost his balance and fell.

He was injured by _____ a different level. (36)
 41

Did the men in the incidents above think that anything unexpected would happen to them?

- Yes
- No

(45)

SC

10627

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STOP UNSAFE ACTS

OBSERVATION CHECK LIST

DECIDE
STOP
ACT
REPORT

OBSERVE

Unsafe Acts Cause 96% Of The Major And Sub-Major Injuries

PERSONAL PROTECTIVE EQUIPMENT

- ☐ Eyes And Face
- ☐ Ears
- ☐ Head
- ☐ Hands And Arms
- ☐ Feet And Legs
- ☐ Respiratory System
- ☐ Trunk

POSITIONS OF PEOPLE

Striking against or being
struck by objects

Caught in, on, or between

Falling at same level

Falling to different level

Contact with temperature extremes or electric current

Inhaling absorbing through the skin, or swallowing harmful material

Overexertion while lifting, pulling, pushing, reaching

SC

10628

LAM011848

Each picture on the facing page is identified by a letter. Beside each letter below, write the injury cause that best describes how each man may be injured. Use the Safety Observation Card to assist you in getting the answers.

A	_____	(44)
	_____	26
B	_____	(50)
	_____	30
C	_____	(47)
	_____	43
D	_____	(31)
	_____	37
E	_____	(38)
	_____	23

You use the injury causes in evaluating the positions and activities of people to foresee and correct situations that could result in injury if the _____.

(29)
40

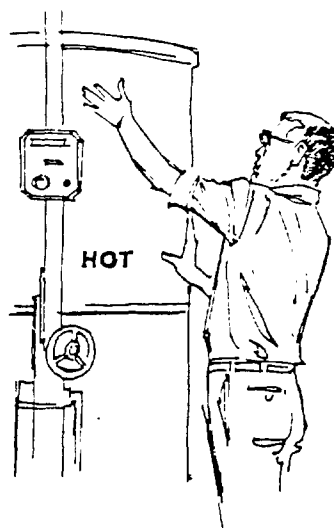
10629

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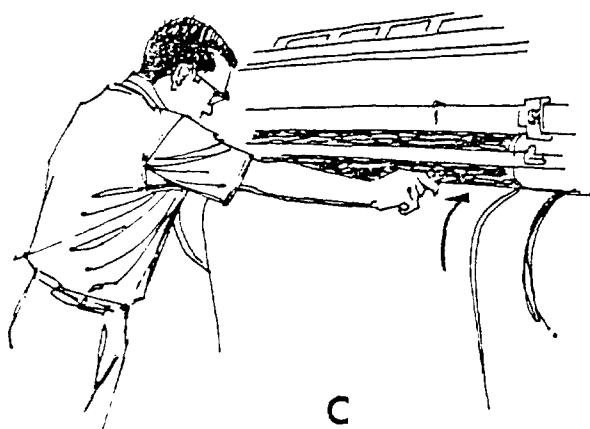
LAM011849



A



B



C



D



E

STOP UNSAFE ACTS

OBSERVATION CHECK LIST

DECIDE

STOP

REPORT

ACT

OBSERVE

Unsafe Acts Cause 96% Of The Major And Sub-Major Injuries

PERSONAL PROTECTIVE EQUIPMENT

- ___ Eyes And Face
- ___ Ears
- ___ Head
- ___ Hands And Arms
- ___ Feet And Legs
- ___ Respiratory System
- ___ Trunk

POSITIONS OF PEOPLE

Striking against or being
struck by objects

Caught in, on, or between

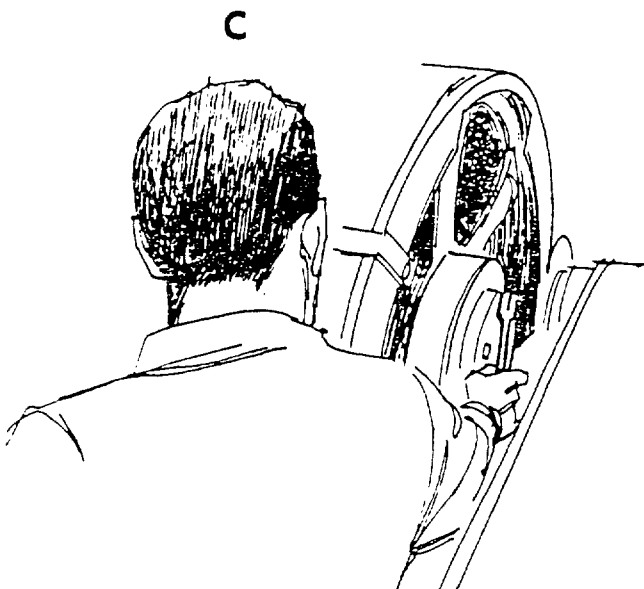
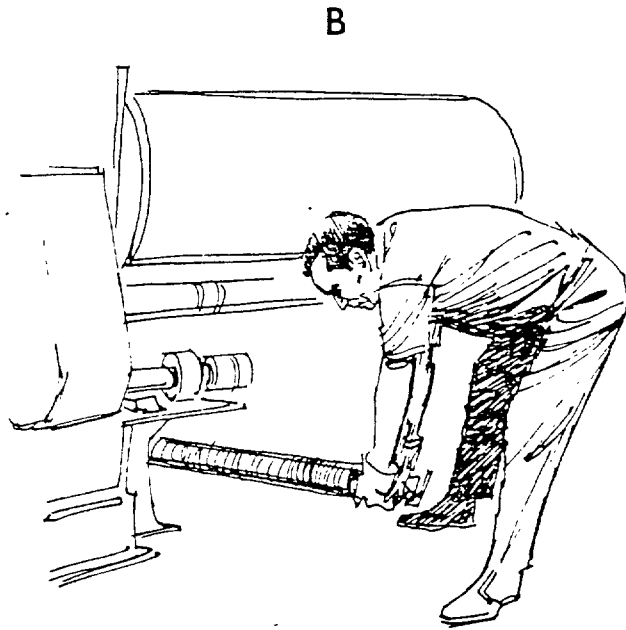
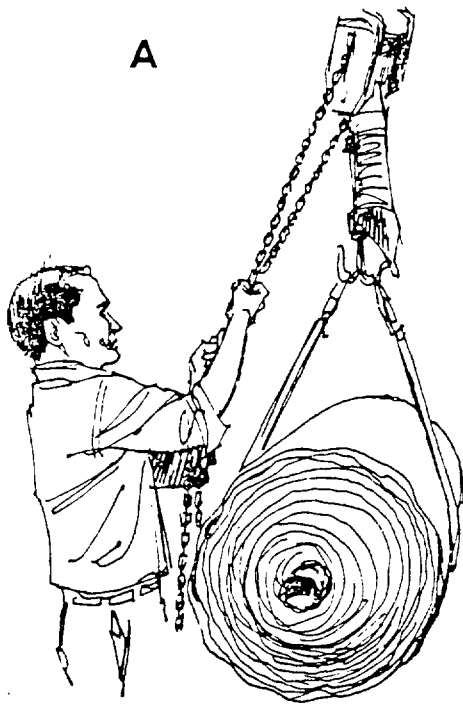
Falling at same level

Falling to different level

Contact with temperature
extremes or electric current

Inhaling, absorbing through
the skin, or swallowing
harmful material

Overexertion while lifting,
pulling, pushing, reaching



On the facing page are pictured four men ~~working in your area of~~
~~responsibility~~. These people are not working safely because each one
is in a position where _____ might result in an unexpected
injury. (59)
29

Each man is identified by a letter. Match the letter with the activity
he is performing.

_____ Lifting
_____ Pushing
_____ Pulling
_____ Reaching (56)
34

An unexpected injury can occur when a person is in

- certain positions only
- practically any position (61)
39

Injury due to overexertion usually occurs when a person is _____,
_____, _____, or _____. (57)
25

You evaluate the positions of people by using the

- unexpected happening
- injuries due to overexertion 30
- injury causes (54)

and then you can foresee and correct situations that could result in
injury if the _____ ¹_____. (55)
33

Refer to the Safety Observation Card
on the facing page.

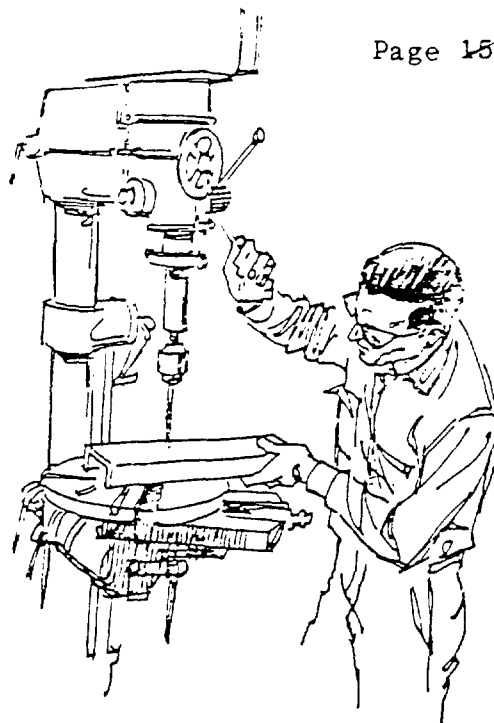
On the right is a picture of part of
your area of responsibility.

Use the Observation Check List to
help you determine any unsafe acts.

Completely fill out the Observation
Report.

(64)

22



10633

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STOP UNSAFE ACTS

OBSERVATION CHECK LIST

DECIDE
STOP
ACT
REPORT

OBSERVE

Unsafe Acts Cause 96% Of The Major And Sub-Major Injuries

___ PERSONAL PROTECTIVE EQUIPMENT

- ___ Eyes And Face
- ___ Ears
- ___ Head
- ___ Hands And Arms
- ___ Feet And Legs
- ___ Respiratory System
- ___ Trunk

POSITIONS OF PEOPLE

Striking against or being
struck by objects

Caught in, on, or between

Falling at same level

Falling to different level

Contact with temperature
extremes or electric current

Inhaling, absorbing through
the skin, or swallowing
harmful material

Overexertion while lifting,
pulling, pushing, reaching

SC

10634

STOP UNSAFE ACTS

OBSERVATION REPORT

Unsafe Acts Observed	Action Taken

Name _____
Date _____
LAM011854 _____

*you are not ready
to use stop card*

SC 10635

ANSWER SHEET -- UNIT II

1. RECOGNIZE AND CORRECT THEM
2. TECHNIQUES
3. I AM
4. 96%
5. PERSONAL PROTECTIVE EQUIPMENT
6. DECIDES, STOPS, OBSERVES, THINKS, ACTS
7. FALSE
8. SKILLED SAFE WORKER
9. INJURIES, INCIDENTS
10. ELIMINATE INJURY, UNNECESSARY EXPOSURE
11. UNSAFE ACTS
12. PLASTIC VINYL COATED (CHEMICAL) GLOVES
13. INJURIES, THINKING
14. EQUAL, COST, PRODUCTION
15. FALSE
16. BURNS FROM MOLTEN PA (STEAM LINES)
17. E - LABORATORY WORK
C - WORK ON DISTILLATION TOWER TRAYS
B - FOR HIGH TEMPERATURE PROTECTION
A - FOR WELDING
D - SAMPLING CHEMICALS, TURNING VALVES, ETC.
18. INJURIES, INCIDENTS
19. OBSERVE
20. FALLING AT
21. THEY ARE NON-CONDUCTIVE TO ELECTRICITY
22. (SEE ATTACHED)
23. OVEREXERTION
24. STRIKING AGAINST
25. LIFTING, PUSHING, PULLING, REACHING
26. FALLING AT SAME LEVEL
27. FALSE
28. CAUGHT BETWEEN
29. OVEREXERTION
30. CONTACT WITH TEMPERATURE EXTREME
31. (SEE ATTACHED)
32. STRUCK BY
33. UNEXPECTED HAPPENS
34. B - LIFTING D - PUSHING
A - PULLING C - REACHING
35. (SEE ATTACHED)
36. UNEXPECTED HAPPENS
37. STRUCK BY OR CAUGHT BETWEEN
38. INJURY CAUSES
39. PRACTICALLY ANY POSITION
40. UNEXPECTED HAPPENS
41. FALLING TO
42. SAFELY
43. CAUGHT IN, ON, OR BETWEEN OBJECTS
44. INJURY CAUSES
45. NO

~~21.~~ Unsafe Act Observed:

22. Employee about to drill a piece of metal without clamping it in place.

Action Taken:

Immediate - stopped man on the job.

Prevent Recurrence:

Held safety contact with man to explain seriousness of incident and potential problems that could occur.

The card should be signed and dated.

"SAFE"

~~30.~~ Unsafe Act Observed - ACY tank cars being loaded safely. Derail in place, STOP TANK CAR CONNECTED sign in place, cover goggles signs in place, area taped off, cars chocked and grounded, and all proper safety equipment being worn.

Action Taken - Told Pumper Gaugers that they were doing an excellent job in using safe procedures, using proper equipment and wearing safety gear. They were protecting themselves and others from possible exposure to ACY.

The card must be signed and dated.

~~34.~~ Unsafe Act Observed - Operator preparing to sample AN wearing only one glove.

Action Taken - Stopped him from proceeding. He had lost glove on the way to sample station. We retraced his steps and found missing glove. Discussed the importance of protecting skin from exposure to AN.

The card must be signed and dated.

10637

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