

RONNIE ROACH

08990.1

11/31/97

1997 Consolidate Audit & PHA Training - Test

1. List the three (there are four total) components of process hazard analysis.

HMTI

CEI

FEI

2. What standard requires that facilities perform a formal process hazard analysis and communicate the results of this analysis to employees?

- ☒ a. OSHA PSM
- b. MOC
- c. Elevated Work
- d. All of the above

3. Why do you need to have PHA training?

- a. OSHA Requires It.
- b. Auditors will ask you about it
- c. Understanding PHA is part of your job
- ☒ d. All of the above

4. Typical Lines of defense for reactive chemical incidents at Glycol-1 are:

- a. Automatic trips
- b. Operating Discipline (procedures)
- c. Engineering Design (metallurgy, relief systems, etc.)
- ☒ d. All of the above

5. The following items should be kept in the PHA file at Glycol-1:

- a. F&EI Calculations
- b. C&EI Calculations
- c. Emergency call-out list
- ☒ d. A & B

6. What safeguards on the degasser prevent a wet chlorine reaction with titanium?

- a. High degasser temperature trip at 130 deg C
- b. Chlorine control valve differential pressure trip
- c. Nitrogen purge flow 100 scfh trip
- ☒ d. A&C

7. What is the worst case scenario for chemical exposure at Glycol-1?

- ☒ a. A hole in the 12" chlorine header
- b. A seal leak in the PO check tank pumps
- c. PSV release on T-300
- d. All of the above

8. What are the lines of defense for the worst case CEI?

- a. Procedures
- b. Emergency Drills
- c. PPM
- ☒ d. All of the above

9. What does F&EI stand for?

- a. Fire and Emergency Incidents
- ☒ b. Fire and Explosion Index
- c. Fire and Electrical Index

10. Which two process units had the highest F&EI rating at Glycol-1?

T/T LOADING

T-300

11. What type of design considerations are utilized to lower the F&EI index of a process unit?

- a. Location
- b. Computer Control
- c. Sprinkler Systems
- ☒ d. All of the Above

12. What areas were reviewed in the Hazardous Transportation Audit?

- a. Rail Car Loading
- b. Cargo Tank Loading
- c. PO Check Tank Area
- ☒ d. A & B

13. Where are the PHA files located at Glycol-1?

OUTSIDE OF CONF ROOM w/ EQUIP FILES

14. What two areas of the plant have had HAZOP reviews?

T/T LOADING

DEGASER

15. Which employees at Glycol-1 are responsible for PHA compliance?

ALL