

(F) 26.1

OSHA PROCESS SAFETY

9:30

To: Distribution

From: Reed Mackay
Date: August 30, 1993Interoffice
Communication

Subject: HAZOP PLANNING MEETING

VISTA

As the next step in OSHA Process Safety compliance a HAZOP planning meeting has been scheduled for September 7 at 9:00 in the main conference room. This meeting will kickoff the process hazard analysis part of Aberdeen's OSHA effort.

I have compiled some notes from different OSHA audits and meetings that gives direction on what is expected from these hazard analysis studies. The intention of the meeting is to gain an understanding of OSHA hazop requirement. We will start the process of selecting team members and a date we expect the team to have their first meeting.

Below is the agenda for the meeting.

The Hazop team.....5 min
Timing & Scheduling.....5 min
Information requirements.....15 min
The Hazop report.....10 min
After the study.....10 min
What next - assignments and action steps...15 min
 Team leader
 Team members
 Training
 Start date

Training

Reed Mackay
Reed Mackay
Senior Process Engineer

Distribution:

(SPT) (RWS) (SJV) (JDO) (DAM) (JEN) (DEK) (RHS) (WSC)
MGD, (MLC) (RAC) CMM, SCH, (BFH) (KDW)
↑
YAC

Attendees

MUST HAVE
FORMAL TRAINING
FOR TEAM LEADER

THE TEAM

The team leader has to be someone that has been properly trained in doing hazops. Some team members must be from the unit and familiar with how it operates (operators, maintenance). The team generally consists of 4 to 5 members including employees from engineering, operations, maintenance, I&E, and safety. Contractors and other departments may need to be included if appropriate. One of the team members will be assigned responsibilities of scribe. Members of the team should remain on the team until the study is complete.

TIMING

- The hazop study will take about 3 months
- Meet on a set schedule 2 days a week or mornings 3 days a week
- Assignments to collect additional information should be done outside of meetings
- Plan to complete one node in a single meeting

The first 2 or 3 weeks is spent collecting information, reviewing the hazop methodology, and gaining a understanding of the process. The team should set up a regular place to meet and a regular schedule that all team members agree to. Discuss the hazop objective, make sure everyone knows what is to be accomplished, divide the process into nodes. The team should complete the analysis at the rate of one node per meeting. The last month is for reviewing results and writing the report.

ITEMS TO BE USED IN A HAZOP STUDY

The first part of this list is taken directly from the new OSHA code.

1. MSDSs of chemicals used in the process
2. PFDs of the process
3. Process Chemistry written description
4. Maximum intended inventories in the unit or equipment
5. Operating procedures and safe operating limits
6. Consequences of deviation from safe operating limits

Needs
to
meet
what
is
said
in
our
program
documentation

ITEMS TO BE USED IN A HAZOP STUDY continued

7. Equipment spec sheets and material of construction
8. P&IDs of the unit
9. Area electrical classification
10. Design basis for all safety systems. This includes relief valves, ventilation systems, interlocks, detection systems, fire water systems, etc. *nearly complete*
11. Design codes and standards employed
12. Energy and material balances for processes built after May 26, 1992

This next list has been taken from OSHA workshops and citations.

1. Use Dow ~~F~~ire and ~~E~~xplosion Index for all siting calculations.
2. OSHA follows the Guidelines for Hazard Evaluation Procedures published by AICHE.
3. LCVC plant intends to do release modeling scenarios to be used in hazop risk assessments.
4. From the Marathon audit
 - A. Include all previous incidents such as fires, emergency shutdowns, releases, emergency work orders, and medical cases
 - B. Include an analysis of the effects caused by engineering or administrative control failures
 - C. Facility siting issues should be included
 - D. Include human factors - operator errors
 - E. A PHA must consider previous "events" in history of the process being studied. It is not mandatory but you should consider "events" from similar processes within the industry.

"STANDARD
HAZOP"

OSHA - *Perkins*
EPA - *outside*

HAZOP REPORT

There are a few items that OSHA will be looking for in the final hazop report. They are:

- identification of the hazards of the process
- identification of previous incidents
- a description of engineering and administrative control for early detection
- consequences of failure of engineering and administrative controls
- facility siting issues (inside the fence line)
- human factor issues
- qualitative rating and evaluation of possible safety and health hazards identified

AFTER THE STUDY

The regulation also speaks to what is required by the employer after a hazop study is completed.

- The employer shall establish a system to address the team's findings.
- Recommendations will be resolved in a timely manner.
- The employer needs to document what actions have been taken to resolve issues brought up in the study.
- The employer is to communicate resolution actions to employees affected by the actions.
- Employers shall retain PHA's and documented resolutions as proof of compliance.

<u>PLANT GOALS</u>		<u>CODE</u>
25% complete - Old Module and VCM Tank Farm	1-1-94	5/94
50% complete - New Module and SA Module	1-1-95	5/95
75% complete - Blend Tanks, Dryers, Incinerators, Silos, and Water Plant	1-1-96	5/96
100% complete - Boilers, De-aerators, Propane System, Utility Systems	1-1-97	5/97