

# Development of Safe Job Procedure – Job Hazard Analysis (JHA)

*2 December 2015*

Presented by

Fenkins L.Y. Chow

Tel: 2766 7632, E-mail: [iclychow@polyu.edu.hk](mailto:iclychow@polyu.edu.hk)

*Industrial Centre*

*The Hong Kong Polytechnic University*



# Relation between JHA and Safe Job Procedure



# Hazard Analysis -> Method Statement

Cap 59AF, Schedule 4, Elements of Safety Management Systems:

## Part 3

1. Evaluation of job related hazards or potential hazards and development of safety procedures.



# Hazard Analysis -> Method Statement

Safe systems of work as:

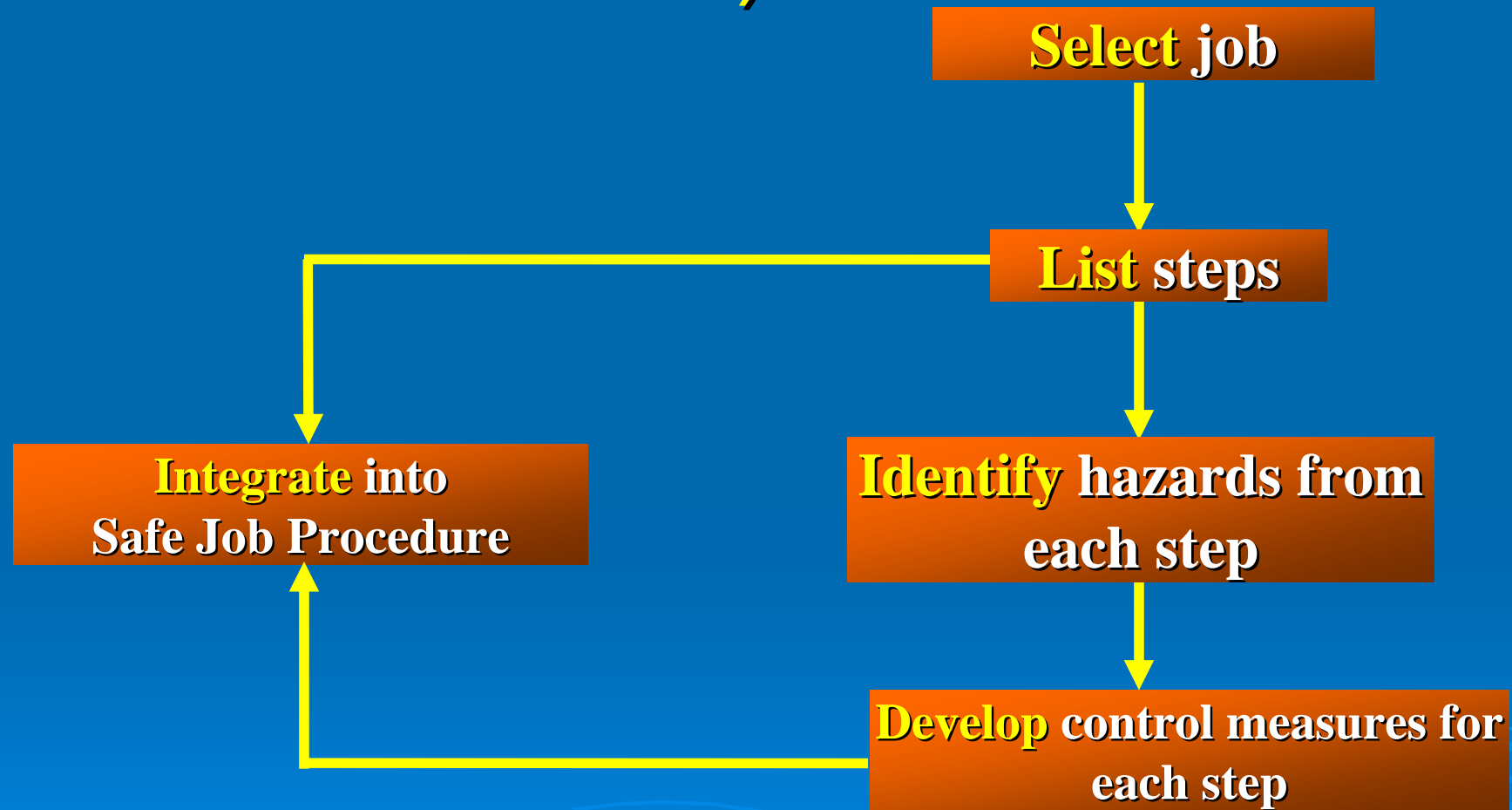
- a formal safety procedure resulting from systematic examination of a task in order to identify all the hazards.
- Safe methods will then be defined.



# How JHA works



# Steps of JHA -> Safe Job Procedure (Method Statement)





## Example

- Prepare 10 bowls of instant noodles
- Conduct JHA, starting from the step of preparation of boiling water







# Job

Prepare 10 bowls of instant noodles

## Steps

1. Fill a pot of water

2. Boil the water

3. Put noodle into boiling water

4. Wait for 1 min.

## Actions

Rinse pot

Fill pot with 10 bowls of water

Place pot on stove

Turn on stove

Open seasoning powder packet

Open noodle packages

Open seasoning powder packet

Use chopsticks to put in the noodles



# List Steps

Basic Job Steps	Potential Accidents or Hazards	Recommended Control Measures



# Identify Hazards

Basic Job Steps	Potential Accidents or Hazards	Recommended Control Measures
1. Fill a pot of water		
2. Boil the water		
3. Put noodles into boiling water		

- FH** : Fall from height
- FL** : Slip, trip or fall on same level
- SB** : Struck by moving or falling object
- SA** : Strike against a fixed or moving object
- TB** : Trapped by collapsing or overturning object
- TI** : Trapped in or between objects
- CO** : Caught on injury involves worker having part of their clothing or body caught on a moving or stationary object

- OE** : Overexertion or repetitive motion
- CW** : Contact with chemicals, electricity, sharp edges, hot surfaces
- E** : Environmental exposures involve radiation, gases, vapours, fumes, dusts, temperature extremes, oxygen deficiencies and noise



# Develop Measures

Basic Job Steps	Potential Accidents or Hazards	Recommended Control Measures
1. Fill a pot of water	a. E hygiene b. FL slippery c. OE full water pot	
2. Boil the water	a. E steam	
3. Put noodles into boiling water	a. CW cut by scissors b. CW splash by boiling water c. E steam	



# Results of JHA integrated into Safe Job Procedure



# Develop Measures

Basic Job Steps	Potential Accidents or Hazards	Recommended Control Measures
1. Fill a pot of water	<ul style="list-style-type: none"> <li>a. E hygiene</li> <li>b. FL slippery</li> <li>c. OE full water pot</li> </ul>	<ul style="list-style-type: none"> <li>a.1 Clean hands</li> <li>a.2 Clean pot</li> <li>b.1 Renovate the tap area</li> <li>b.2 Frequent mopping</li> <li>b.3 Wear non-slippery shoes</li> <li>c.1 Fill in water with smaller pot</li> </ul>
2. Boil the water	<ul style="list-style-type: none"> <li>a. E steam</li> </ul>	<ul style="list-style-type: none"> <li>a.1 Cover the pot with a lid</li> <li>a.2 Do not open the lid on your side</li> <li>a.3 Keep first aid facility available</li> </ul>
3. Put noodles into boiling water	<ul style="list-style-type: none"> <li>a. CW cut by scissors</li> <li>b. CW splash by boiling water</li> <li>c. E steam</li> </ul>	<ul style="list-style-type: none"> <li>a.1 Cut open all the noodle packs before boiling water</li> <li>b.1 Use strainer to put in the noodles</li> <li>c.1 Ditto</li> </ul>



# Integrated into Safe Job Procedure

- **WEAR** non-slippery shoes when  
Basic Job Steps
- **CLEAN** hands before touching food  
or cooking utensils

1. Cut open all the noodle packs and seasoning powder packs
2. Clean pot and bowls
3. Fill a pot of water with a smaller pot
4. Boil the water
5. Cover the lid and wait for the water to boil  
**Always DON'T open the lid on your side**
6. Put noodles into boiling water
7. Put seasoning powder into boiling water
8. Wait for 1 minute
9. Distribute noodles into bowls

## Recommended Control Measures

- a.1 Clean hands
  - a.2 Clean pot
  - b.1 Renovate the tap area (long-term soln)
  - b.2 Frequent mopping (go to other admin)
  - b.3 Wear non-slippery shoes
  - c.1 Fill in water with smaller pot
- a.1 Cover the pot with a lid
  - a.2 Do not open the lid on your side
  - a.3 Keep first aid facility available (go to other admin)
- a.1 Cut open all the noodle packs before boiling water
  - b.1 Use strainer to put in the noodles
  - c.1 Ditto



# Survey for groups of mature students

1. After lecture, 19 groups of mature students were formed
2. By using JHA
  - they needed to prepare a safe job procedure
  - which was used as a guideline for the related job operator
3. In any one group, there was 1 member familiar with a risky engineering job they chose to analyse
4. They were provided with the following WS and samples





# JHA WS & Sample

JOB HAZARD ANALYSIS		Job or Operation Title	
DIVISON	Job Location	Title of Employee Doing Job	
Date Performed	Team Leader:	Team Members:	
BASIC JOB STEPS	POTENTIAL ACCIDENTS OR HAZARDS	RECOMMENDED CONTROL MEASURES	

JOB HAZARD ANALYSIS		Job or Operation Title	
		Preparing Bowls of Instant Noodle	
DIVISON	Job Location	Title of Employee Doing Job	
Chinese Restaurant	Kitchen	Assistant Chef	
Date Performed	Team Leader:	Team Members:	
24 August 2005	Mr ABC	Mr KKK, Ms LLL	
BASIC JOB STEPS	POTENTIAL ACCIDENTS OR HAZARDS	RECOMMENDED CONTROL MEASURES	
1. Prepare a pot of water	a. E dirt/germ b. FL slippery c. OE full water pot	a.1 Clean hands a.2 Clean pot b.1 Renovate the sink area b.2 Frequent mopping b.3 Wear non-slippery shoes c.1 Fill in water with smaller pot	
2. Boil the water	a. E steam	a.1 Cover the pot with a lid a.2 Do not open the lid on your side a.3 Keep first aid facility available	
3. Put noodles into boiling water	a. CW scissors b. CW boiling water c. E steam	a.1 Cut open al the noodle packs before boiling water b.1 Use long chopsticks to put in the noodles c.1 Ditto	

# Safe Job Procedure WS & Sample

Safe Job Procedure	Job or Operation Title	
DIVISION	Job Location	Title of Employee Doing Job
Date	Prepared by:	Signed:

<b>General Precautions:</b>
<b>Procedure:</b>

Safe Job Procedure	Job or Operation Title Preparing Bowls of Instant Noodle	
DIVISION Chinese Restaurant	Job Location Kitchen	Title of Employee Doing Job Assistant Chef
Date 24 August 2005	Prepared by: Mr ABC	Signed: XXX

<b>General Precautions:</b>
<b>WEAR</b> non-slippery shoes when going into kitchen
<b>CLEAN</b> hands before touching food or cooking utensils
<b>Procedure:</b>
1. Cut open all the noodle packs and seasoning powder packs
2. Clean pot and bowls
3. Fill a pot of water with a smaller pot
4. Boil the water
5. Cover the lid and wait for the water to boil
<b>Always DON'T open the lid on your side</b>
6. Use long chopsticks to put the noodles into the boiling water

# Common Problems Identified

1. Confusion between jobs and job steps



# List Steps

Basic Job Steps	Potential Accidents or Hazards	Recommended Control Measures
1. Prepare the noodles		
2. Deliver the noodles		



# Common Problems Identified

1. Confusion between jobs and job steps
2. Hazards not identified with control measures



# Develop Solutions

Basic Job Steps	Potential Accidents or Hazards	Recommended Control Measures
1. Prepare a pot of water	<ul style="list-style-type: none"> <li>a. E hygiene</li> <li>b. FL slippery</li> <li>c. OE full water pot</li> </ul>	<ul style="list-style-type: none"> <li>a.1 Clean hands</li> <li>a.2 Clean pot</li> <li>b.1 Renovate the tap area</li> <li>b.2 Frequent mopping</li> <li>b.3 Wear non-slippery shoes</li> <li>c.1 Fill in water with smaller pot</li> </ul>
2. Boil the water	<ul style="list-style-type: none"> <li>a. E steam</li> </ul>	<ul style="list-style-type: none"> <li>a.1 Cover the pot with a lid</li> <li>a.2 Do not open the lid on your side</li> <li>a.3 Keep first aid facility available</li> </ul>
3. Put noodles into boiling water	<ul style="list-style-type: none"> <li>a. CW cut by scissors</li> <li>b. CW splash by boiling water</li> <li>c. E steam</li> </ul>	<ul style="list-style-type: none"> <li>a.1 Cut open all the noodle packs before boiling water</li> <li>b.1 Use strainer to put in the noodles</li> <li>c.1 Ditto</li> </ul>



# Common Problems Identified

1. Confusion between jobs and job steps
2. Hazards not identified with control measures
3. Safe job procedure not based on JHA results



# Integrate into Safe Job Procedure

- **WEAR** non-slippery shoes when going into kitchen
- **CLEAN** hands before touching food or cooking utensils

1. Cut open all the noodle packs and seasoning powder packs
2. Clean pot and bowls
3. Fill a pot of water with a smaller pot
4. Boil the water
5. Cover the lid and wait for the water to boil  
**Always DON'T open the lid on your side**
6. Use strainer to put noodles into boiling water
7. Put seasoning powder into boiling water
8. Wait for 1 minute
9. Distribute noodles into bowls

## Recommended Control Measures

- |  |
|--|
| a.1 Clean hands                            |
| a.2 Clean pot                              |
| b.1 Renovate the tap area (long-term soln) |
| b.2 Frequent mopping (go to other admin)   |
| b.3 Wear non-slippery shoes                |
| c.1 Fill in water with smaller pot         |
- 
- |   |
|---|
| a.1 Cover the pot with a lid                              |
| a.2 Do not open the lid on your side                      |
| a.3 Keep first aid facility available (go to other admin) |
- 
- |   |
|---|
| a.1 Cut open al the noodle packs before boiling water |
| b.1 Use strainer to put in the noodles                |
| c.1 Ditto   |





# Common Problems Identified

1. Confusion between jobs and job steps
2. Hazards not identified with control measures
3. Safe job procedure not based on JHA results
4. Safe job procedure with steps not related to operator's work



# Integrated into Safe Job Procedure

- **WEAR** non-slippery shoes when going into kitchen
- **CLEAN** hands before touching food or cooking utensils

1. Cut open all the noodle packs and seasoning powder packs
2. Clean pot and bowls
3. Fill a pot of water with a smaller pot
4. Boil the water
5. Cover the lid and wait for the water to boil  
**Always DON'T open the lid on your side**
6. Use strainer to put noodles into boiling water
7. Put seasoning powder into boiling water
8. Wait for 1 minute
9. Distribute noodles into bowls

## Recommended Control Measures

- |  |
|--|
| a.1 Clean hands                            |
| a.2 Clean pot                              |
| b.1 Renovate the tap area (long-term soln) |
| b.2 Frequent mopping (go to other admin)   |
| b.3 Wear non-slippery shoes                |
| c.1 Fill in water with smaller pot         |
- 
- |   |
|---|
| a.1 Cover the pot with a lid                              |
| a.2 Do not open the lid on your side                      |
| a.3 Keep first aid facility available (go to other admin) |
- 
- |   |
|---|
| a.1 Cut open al the noodle packs before boiling water |
| b.1 Use strainer to put in the noodles                |
| c.1 Ditto   |



# Conclusions

1. Most of the students could arrive at a safe job procedure based on JHA
2. But, some found that the procedure was a distant away from the method statement they submitted for tendering purpose.
3. This difference is due to
  - their method statement were for reference by all concerned parties.
  - but the procedure in the assignment was for the operator's reference
4. It doesn't mean that JHA cannot be used to prepare such method statement, but further meticulous thought and categorization work are required.
5. Indeed from JHA to Safe Job Procedure, it requires very detailed thought about the hazards associated with each step and how to address them. It is not a simple Preliminary Hazard Assessment.

