

CHAPTER VI

IMPLEMENTATION AND EVALUATION

6.1 Implementation process

- Conduct training session to operators about effective shift handover with manual to be study. Conduct and prepare manual and presentation by Briefing to the day shift operator for 2 hours shall be action by Job Instructors. Manual Handbook can be found in APPENDIX 2
- Design log book/log sheet for personal operation
- Design shift handover system
- Construct work instruction procedure for operation team regarding to shift handover.

In order to understand the validity and reliability or other problems that might cause during the implementation and further development by given the Shift Superintendent and Lead Team Operator from each shift the questionnaire and feedback.

The is designed to observed the ease of convenience and recommendation from operators and Shift superintendent to send to Audit Team and endorse to the management team by focused in questionnaire including

- How do they feel about following the new work instruction?
- Do you think a new structured log sheet has been improvement about shift handover?
- Do you think that a new structured log sheet should be something else to be added?
- Do you think a New Shift Handover method has been improved working behaviour?

Moreover, the random interviewed the personnel involved e.g. Technologist, Engineering, and safety.

The topics including:

- New format of structured logs sheet
- Is it friendly use?
- What are the improvements should be done on your own view?

6.2 Objective implementation in Shift Hand Over system

In prior to improve on effective shift handover and for the best safe practice of operation after the implementation of Shift Handover Audit in Phase 1 Therefore, operating personnel would then give Log sheet for each of operation position to be implemented on 18 August 2008.

6.3 Evaluation and Follow up:

To understand and analyze of the Validity, reliability and problems that might occur after post implemented. Moreover, any changes to make the system of effective shift handover can be the best effective for all operation during shift change effective in continuous flow. Therefore, after the post implemented, Audit team committee have asked Shift Superintendent and Lead Team Operator from each shifts from shift A to D gather the feedback and suggestion from operator in each shift and shift superintendent to Audit Team committee to endorsed and present to Refinery operation manager.

Items for Feedback including:

- In prior to maintain the system and effectiveness of shift handover, Work Instruction must be create in ISO 9000:2000 system to maintain and appropriate the system of Effective shift Handover. By conduct an Auditing from internal auditors of ISO standard system.
- Log Sheet for Shift Superintendent shall attached via email and shall be distributed to all concern people that get involved especially for Management level team. Moreover, it shall be kept in form of electronic file and to be store in the IT system Drive I that is central drive for only authorize person can be access.
- Log sheet for Lead Team Operator shall included Plant Conditions for highlight activities that necessary to PI program system which can Link process conditions in the real time attached with Log sheet too. Therefore, shift superintendent can then attached these highlight activity by using Electronic mail and distributed to all concern people for acknowledge and understanding about process plant conditions.
- Log sheet for Field operators have suggested that each activity shall be identified between Routine Job/Monitoring activities and non-routine activities.
- For new operator, training and development for effective shift handover topic shall be well trained in prior to aware of risk might occurred during the operation and also prepared competency assessment criteria to be evaluate their competency regarding to shift handover.

6.4 Improvement:

Once the feedback items have been gathered, audit committee team need to follow up in prior to improve shift handover system by implemented.

- Revised of work instruction from suggestion for user satisfaction and maintain the practice.
- Revised log sheet format for Lead Team Operator from feedback and suggestion items.
- Developed and create log sheet for field operators as the following list below:

Given that Experience operators who standby each unit/area for each shift brain storming their own Routine job or check list. The purpose is to create the system for plant monitoring in order not to make a mistake or forget during paroling plant each day. By given Shift Superintendent perform random interview for operators to ensure that associate checklist item has been perform or not. By interview and check the detail and monitor the plant condition. Including, equipment or process plant. The criteria of monitor or routine checklist are:

1. Key Parameter in Response area.
2. Key condition of process unit
3. Key equipment of the unit area response

Attached of checklist shall be together with log sheet at all times. Moreover, it shall be acknowledged by lead team operator and shift superintend signature too

- Routine for operation checklist can be found in APPENDIX 4
- Competency assessment criteria for new operator sheet can be found in APPENDIX 5

6.5 Evaluation:

Comparison between the old and new log sheet has been shown in the table below.

New Log sheet	Old Log sheet
Structured by adding:- Mandate categories e.g. Safety Environment, Maintenance, Technical problems, work outstanding Discretionary categories e.g. plant condition, product qualities, KPI	It was structured but no important items were included. Style and content varied between individuals. The log sheet content was largely historical, with little proactive content indication <i>what should</i> or <i>might</i> happen in the future
For Shift Sup./LTO log sheet had linked the “Real Time” information of the plant conditions into the log sheet. This is an option for the reader to select to update data or not	Key in the data of process conditions manually usually consumes time.
New method of conduct shift handover	Old method of conduct shift handover
Concentrated on Face-to-face communication and two way communication aimed for “Rich Communication” and standardize method	Many styles and not much concentrated on two way communication
Talk through the log sheet in the structured way so as to ensure no missing of information	Not always talk through the log sheet
Prepared a summary of events when handing over to personnel returning after long absent from work	For operators were not aware on this matter but some Supervisors/LTO had done.

Table 6.2: Comparison between new/old methods of shift handover

6.6 Accident/Incident evaluation:

The evaluation and measurement the rate of Accident or incident that associates with failure in effective shift handover has not been found. However, we do not wish or expected to happen in the refinery. Therefore, the performance of the system shall be continuing monitor and evaluate in the long term such as quarterly or 6 months review. Also identified what would be the further development in term of avoid accident happen in refinery. Such as prevention on safety during maintenance activity by conducting safety stand down day for each Environmental Key Performance Indicator after implemented shows the results as below:

Number of Environmental Indicator

- Number of Environment. Non-Compliance (Air, Water, Groundwater) 0%
- Number of Enforcement Action (Citation / Fines)
- Number of Recordable Spills [Includes spill > or = 1 bbl to secondary containment or land or Sheen (>or = 0.1 bbl) spill to water] 0 bbl
- Number of All Spills 0 case
- Number of Validated Complaints 0 case
- Cleanliness Inspection Score: Excellence

6.7 Conclusions

The approach described has proved to be practical, empirical- based method of assessing current standards of shift handover communication and achieving measurable improvement. By involving post-holders in the process, a degree of commitment was obtained which is unlikely to have the resulted from other methods. The approach described may prove useful to other refineries or industries endeavouring their standards of shift handover communication.