CERT Response – A Key Element to Emergency Preparedness

Updated By CPT Nicholas Goh
Scope of Presentation

1. Introduction (Video) - Overview of CERT
   a. What is CERT?
   b. Regulatory Requirements
   c. Emergency Preparedness

2. CERT Audit System and Evaluation Methodology

3. Conclusion
Company Emergency Response Team (CERT)

- A group of personnel selected by a company to be competently trained in preventing any emergency from escalating into a major disaster.

- CERT Primary Role: To mitigate and control an emergency situation of affected premises during the initial stages prior to SCDF’s arrival.

- Under the Fire Safety (Petroleum & Flammable Materials) Regulation 2005, all companies are required to establish and submit an ERP as part of the requirements when applying for a P&FM storage licence.
When the Problem is Nipped in the Bud……..

Intervention Measures to Prevent Incident
- Up-right overturned drum
- Clean up spill

Intervention Measures to Minimize Loss
- Use of fire extinguisher
- Activate sprinkler system
- Remove surrounding drums

Spill from drum → Pool fire from spill → Fire spread to entire factory

All Full-Blown Events Starts With an Initiating Event!
CERT Audit Methodology
CONDUCT OF CERT AUDIT

- The CERTs are assessed based on their documentation of records and their response activities during the simulated practical scenarios:

  **Document Records check** *(graded)*
  - Validation of ERP
  - CERT Training
  - In-house Emergency Response Equipment

  **Practical Assessment for emergency response** *(graded)*
  - Activation and Response
  - Incident Size-up
  - Conducting Mitigation Operations Competently, Effectively and Safely
  - Support Activities
  - Linking up with SCDF
  - Support On-going Operations and Recovery

- The audits serve to identify areas of strengths, weaknesses and to propose recommendations for improvements
Stages of CERT Audit

Stage 1 (Before Audit)
- Sending Notification letter to company
- Approval Of ERP
- CERT briefings to Industry

Stage 2 (Actual Day)
- Briefing on Audit Reqs and Scenario
- Conduct of on-site Practical Assessment
- Debrief to Company

Stage 3 (After Audit)
- Send Post Audit Report to Company

Duration:
- 2 Months before Audit
- 1 Week before Audit
- Total duration: 3 hrs
- 3 Weeks
A “3 + 6” standard evaluation checklist method is used:

- Worst credible scenario in Company’s ERP is used for assessment
Company must produce a valid and approved version of the ERP during Scenario Discussion

CERT members will be interviewed to ascertain if they are familiar with ERP
CERT MANPOWER

- Minimum manpower required is 6 staff (1 SMC, 1 SIC, 4 ERT members)

- A CERT comprises at least 6 members, namely 1 SMC, 1 SIC and 4 Response Team members or more to sufficiently handle emergency situations effectively.

- The organizational structure of CERT is divided into 3 main levels:
  - The SMC will be responsible for the overall management of the CERT
  - The SIC is the leader of the Response Team Members
  - The RT are personnel directly involve in the groundwork of the emergency response.
CERT Training

- Training has an important bearing on the safety and proficiency of the CERT and can make a significant difference in the CERT’s response during the initial stages of an incident. Companies should provide adequate emergency response training to all their staff.

- Types of CERT’s training recommended:
  - Incident Management
  - Fire-fighting and HazMat Response
  - First Aid
The SMC is a senior member of the company’s management. He is the overall person-in-charge of the emergency response operations in the company and deals with senior government officials from SCDF, SPF and NEA, etc.

During an incident:

- Appreciation of Situation
- Emergency Scene / Incident Management
- Information Management During Emergencies
CERT Training

Site Incident Controller (SIC)

- The SIC is the leader of the CERT

- During an incident:
  - Incident Management
  - Fire-fighting Response:
    - Fire-fighting with extinguishers/hose reel
    - Safety precautions
    - Basic first aid and CPR
    - Evacuation
    - Use of breathing apparatus
  - HazMat Response:
    - Classification of hazardous materials
    - Primary hazards associated with different hazardous materials
    - Mitigation and containment
CERT Training and Exercises

Response Team (RT)

- Fire-fighting Response
- HazMat Response
- First Aid
In-house Emergency Equipment

- A key ingredient for a successful CERT response is well-kept, serviceable and easily accessible equipment.

- The equipment must be sufficient to handle the incipient stages of the worst credible scenario as foreseen by the company in its ERP.

- Main types of equipment to have in place:
  - Personal protective equipment (PPE)
  - Emergency response equipment
  - Communication equipment

- Equipment readiness will be further verified during the practical assessment
In order to enhance the company’s preparedness towards effective emergency management, practical assessment of CERT needs to be conducted to validate the ERP and to identify any areas for improvement.

The desired outcome of the exercise is to certify that the company’s CERT is capable of containing an incipient threat, by swiftly mitigating an emergency situation according to established plans and Procedures.

During a practical exercise, the CERT should successfully demonstrate these capabilities through specific activities which include:

- Activation and Response of CERT;
- Incident Size Up;
- Fire Fighting and Mitigating Operations;
- Support Activities;
- Linking up with SCDF upon arrival; and
- On-going operation and recovery.
Activation and Response Time

- The first person who discovers the fire or Hazmat incident should activate the nearest fire alarm call point, confirm the location of the incident with the Fire Command Centre (FCC) by phone and attempt to put out the fire if the situation permits.

- The CERT members, upon activation, should gather at the CERT assembly points with the necessary equipment swiftly (~1 min) and reach the incident site and ready to response within ~5 min.
Donning Personal Protective Equipment (PPE)

- CERTs must be equipped with basic PPE – based on threats they are exposed to
- They must be competent in donning PPE in a quick timeframe
- They should not enter hazard zones without proper donning of appropriate PPE
Incident Verification/ Notification

- SICs should respond straight to the incident site donning appropriate PPE upon activation and perform following activities:
  - Verify the incident
  - Conduct Site Assessment & Determine the extent of emergency
  - Priorities actions to be taken and deploy ERT to:
    - conduct snatch rescue
    - mitigate the leak/fire
    - determine isolation zone
  - Report to SMC
  - Notify SCDF and neighbouring premises upon verification
  - Set up field incident command post in the safe zone and link up with SCDF’s ground commander
Conducting Mitigation Operations

- The RT consists of personnel trained in basic emergency response actions such as fire fighting, first aid and hazmat mitigation.

- Depending on the scenarios requirements, the RT should also set up water supply to contains the fire and defensive hose jets to protect surrounding installations.

- If there are people missing or unaccounted for, the SIC should activate search and rescue operations for missing or trapped victims within the incident site.
The RT can also include first aid personnel, operators and security wardens to perform following supporting activities:

- First Aid Treatment and CPR on evacuated casualties-
- Security of the company’s premises
  - No access to unauthorised personnel
  - Conduct a thorough search of the premises to ensure that no personnel are left behind
- Smooth and orderly evacuation of the company employees by guiding them to the Evacuees Assembly Area (EAA) and perform a head at EAA to account for all company personnel
SMC and SIC should conduct proper handing over of the incident command with SCDF’s ground commander upon arrival & provide information as follows:

- Description of the incident, risks and hazards
- CERT deployment
- Casualty Status
- Methods of mitigation
- Layout plans, MSDS, resources available to assist SCDF
Ongoing Operations & Recovery

- After linking up with the SCDF’s ground commander, the CERT should continue to support SCDF in its fire fighting and hazmat mitigation efforts until the end of the operation.

- The SIC is expected to perform recovery and wind down operations by:
  - Ensuring that all personnel and equipment are properly decontaminated
  - Ensuring the incident site is cleaned up and the waste is disposed off
  - Assisting SCDF or relevant authorities in the investigation of the incident

- Return back to normalcy
Conclusion

The success of the CERT scheme is a result of SCDF’s close collaboration with the industry.

By engaging the industry to play an active role in emergency response, SCDF has significantly reduced the probability of initiating events being escalated and thus incurring undesired consequences.

The CERT is now an integral aspect to business continuity and has boosted the confidence of the public and workers in engaging activities in a safe and secure environment.