CERTs: Key Partners in Emergency Preparedness for Business Continuity

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Scope of Presentation

1. Introduction (Video - Overview of CERT)

2. CERT Audit System and Evaluation Methodology

3. Main Findings

4. Conclusion
What can go wrong?

Fire at Factory Complex at Sungei Kadut, 3 Aug 08

Fire at Somerset Sub Power Station, 2 Jul 08

Fire at Essential Oils Warehouse at Woodlands Terrace, 12 Jun 08

Shipyard Accidents, Jun 08

Tank fire at JB, 17 Aug 08

3 weeks, 4 accidents, 5 dead
What can be done to prevent catastrophic incidents.......  

- **Fire/HazMat Safety installations**  
- **Good Housekeeping and Safe Practices**  
- **Well equipped, trained, competent and effective CERTs**
How to ensure CERTs are competent?

Since Apr 08, 133 premises participated in audits conducted by SCDF
CERT Audit System and Evaluation Methodology
# SCDF CERT Audit System

## Stage 1
**Before Audit**
- Sending Notification letter to company
- Approval Of ERP
- Monthly CERT briefings

### Timeline:
- 2 Months before Audit
- 1 Week before Audit

## Stage 2
**Actual Day**
- Briefing on Audit Reqs and Scenario
- P & FM Storage License Inspection
- Ex Scenario Discussion cum Ops Survey

### Duration:
- 1 hr
- 2 hrs
- Total duration: 3 hrs

## Stage 3
**After Audit**
- Conduct of on-site Practical Assessment
- Debrief to Company
- Send Post Audit Report to Company

### Timeline:
- 3 Weeks
A “3 + 6” standard evaluation checklist method is used:

1. Activation and response
2. Incident size-up
3. On-going operations and recovery
4. Support activities
5. Linking up with SCDF upon arrival
6. Fire-fighting and mitigating operations

Worst credible scenario in Company’s ERP is used for assessment
Desired Outcomes

- Initiation of emergency response system
- Quick dispatch and arrival of the CERT
- Assessment of incident scene, communication of the situation, requests for appropriate resources
- Notify authorities/neighbors
- Response activities conducted competently, effectively and safely
- Threats contained and managed in accordance to ERP
MAIN FINDINGS OF CERT AUDITS (Apr – Jul 08)
85% of the premises audited PASSED
FINDINGS – DOCUMENT RECORDS

A 3 + 6 standard evaluation checklist method is used:

1. Checking Document Records
2. Equipment Readiness
3. MP & Training

and the worst credible scenario as spelt out in the company’s ERP is used
FINDINGS - CERT MANPOWER (Apr – Jul 08)

- 6% of companies did not meet minimum manpower requirements of 6 (1 SMC, 1 SIC, 4 ERTs) for CERT

- A case by case evaluation is done by SCDF to ensure in lieu ofCERT manpower the premise has proper fire and HazMat protective systems in place to prevent an initiating event to escalate into a major incident

- Coys who fail to meet requirements are subject to audit as well
FINDINGS - TRAINING RECORDS (Apr – Jul 08)

- Trainings conducted for CERT
  - In-house training
  - External training providers are engaged
  - Both external and in-house training

- Frequency - some monthly but most annually

- 28 External trainers available (including SCDF)

- Issues
  - 18% had no training at all
  - 21% had insufficient training – i.e. either first-aid, fire-fighting or HazMat only
**FINDINGS - EQUIPMENT READINESS (Apr – Jul 08)**

<table>
<thead>
<tr>
<th>S/No.</th>
<th>In-house Emergency Equipment</th>
<th>Assessment</th>
<th>No. of Premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fire extinguishers, hose reels and stretchers – <em>some not sufficient for worst credible scenario</em></td>
<td>Basic</td>
<td>50%</td>
</tr>
<tr>
<td>2</td>
<td>1st level fire-fighting and HazMat response equipment (BA sets, HPS suits, nozzles, hoses, foam monitors, spill kits, sealing bandage, portaflex shower, detectors, stretchers, etc.)</td>
<td>Adequate</td>
<td>50%</td>
</tr>
<tr>
<td>3</td>
<td>Fire-fighting and HazMat response equipment (as per S/No.3) with own fire engines or supported by complex fire engines. Most have good fixed fire-fighting installations and some have big water guns for deployment in event of incidents.</td>
<td>Good</td>
<td></td>
</tr>
</tbody>
</table>

**SINGAPORE CIVIL DEFENCE FORCE**
A 3 + 6 standard evaluation checklist method is used:

1. Activation and response
2. Incident size-up
3. Fire-fighting and mitigating operations
4. Support Activities
5. Linking up with SCDF upon arrival
6. Ongoing operations and recovery

and the worst credible scenario as spelt out in the company’s ERP is used.
Activation and Response Time

A target of 1 minute was set for activation to Assembly Area

85% met requirements

A target of 5 minutes was set for response to incident site

83% met requirements
Why response is slow

- Location of emergency equipment and assembly areas were too far apart
- CERT members not competent or trained in donning PPE
- CERTs reporting to assembly area did not bring along the emergency equipment
- SIC was involved in other support operations such as evacuation before responding to site to assess and mitigate the incident
- First person spotting incident failed to activate the nearest call point/main fire alarm panel
- No system to activate staff – manual actions taken to alert staff was slow
Incident Verification/Size Up

- Most of the SICs are able to:
  - verify the incident
  - make an assessment of risk
  - prioritise actions to be taken
  - deploy ERTs
    - conduct snatch rescue
    - mitigate the leak/fire
    - determine isolation zone
  - notify SMC & SCDF

- However, some do not:
  - notify SCDF at onset
  - conduct immediate incident management as they are involved in other activities (e.g. evacuation)
Donning Personal Protective Equipment

- Most of the CERTs are competent in donning PPE in a quick timeframe
- However, there are some not familiar with proper donning and enter hazard zones without BA sets
- Some are not equipped with basic PPE
Conducting Mitigation Operations

- Most CERTs are
  - Competent in using *correct tactics* for mitigation operations
  - Able to *deploy* their in-house emergency equipment *fast and effectively*
Conducting Mitigation Operations

- However, there are lapses seen
  - In tactics employed
    - Wrong extinguishing medium used
    - Insufficient hose length
    - Containment not effective
    - Casualties not rescued
  - Equipment readiness
    - Cannot couple hose to ground monitor
    - Low water pressure
Casualty Evacuation

- Generally, casualty evacuation was good and swift with decontamination conducted before evacuation to FAP but lapses seen
  - decontamination not done in some cases
  - improper handling of casualty
  - no gloves worn
  - handing over casualty to unprotected ERT member
Linking Up With SCDF

- SCDF is swiftly brought to incident site except when staff leading them are unfamiliar with layout of large complexes

- SIC links up with SCDF upon arrival & provide information to the SCDF ground commander
  - Description of the incident, risks and hazards
  - CERT deployment
  - Casualty Status
  - Methods of mitigation
  - Layout plans, MSDS, resources available to assist SCDF
Support Operations

- Good CERTs know when and how to support the ongoing operation with SCDF
- Some retire after SCDF arrival
CONCLUSION

- Reasons CERTs do not meet audit requirements
  - Insufficient manpower
  - Not familiar with roles
  - Not trained
  - Not competent in incident management
  - Ignorance of safety
CONCLUSION

- The CERT is an integral part of a company’s preparedness and response for effective emergency management.

- From a business perspective, CERT will not only reduce the possibility of disruption to the company’s daily business routine, but it will also augur well with the company’s overall business continuity plans.

- In the long run the success of CERT in the industries will also provide for a safe and secure Singapore.
THANK YOU