

## 1. Introduction

The Control of Major Accident Hazards (COMAH) Regulations requires operators to demonstrate emergency preparedness and more specifically, to develop, maintain and exercise incident specific pre-plans for major incidents that can be easily used as an aid for incident control. In addition, major incident pre-plans should act as training aids for responders, enabling desktop and practical exercise response performance to be measured.

Site Operators should ensure that all installations have Emergency Response Plans (ERP's) in place that are: -

- based on the individual installation COMAH report major incident scenarios;
- relevant to the installation (site specific);
- fit-for-purpose;
- easy to use;
- helpful to the end users.

Site incident specific pre-plans are termed as *Emergency Response Plans (ERP's)* and consist, principally, of a single page of text intended as guidance and instruction for major incident responders. On the reverse of the text page, an "effects" map is provided which will indicate either potential jet or pool fire flame impingement area, radiant heat hazard areas or other affected area where adjacent or nearby plant, tanks, vessels and associated equipment will, or may be, affected by an emergency incident. Gas release distance contours are also indicated on "effects" maps as applicable.

## 2. Emergency Response Plans

### 2.1 Purpose of the ERP's

The ERP's are provided for installation Technicians/Incident Controller (IC), ERT Leader and ERT Members. The plans consist of a 3-tiered response with: -

- 1 Plant or facility Technicians and IC's as the first line responders.
- 2 ERT Leader/ERT as second line responders.
- 3 Local Authority Fire and Rescue Service (LAFRS) as the third and final responders.

The ERP purpose is to provide instant written instructions, guidance and helpful information for the above personnel to Assist them at the critical early stage of a serious or major incident, and, to provide sufficient potential hazard information to enable informed decisions on the safety of personnel responding to the incident. The plans are intended to provide guidance for the first 15-20 minutes of the incident and indicate the actions and resources required to deal with the incident during this time.

Once this time elapses, the Emergency Control Centre (ECC) will have been mobilised and an initial stable response (or evacuation) should have been established and if the incident duration should be prolonged, Site Operators and/or Local Authority Fire & Rescue Service will develop an ongoing strategy for dealing with this and will have early knowledge, reference and access to other relevant Site Operators emergency plans and Off-Site emergency plans.

### 2.2 ERP Sources and Links to COMAH Installation Report

The ERP's are prepared using information from incident scenario worksheets in line with the Fire Hazard Management (FHM) process. These scenario worksheets are the principal source of the strategy, tactics, resources and other Information used for the individual ERP's.

The incident scenario worksheets are based on the major scenarios contained in the COMAH Installation Reports for the particular plant or facility. This link to the COMAH scenarios, the control, preventive and mitigation measures in place for each scenario, and the consequence and emergency response assessments, ensures that a clear and auditable trail for the ERP's is maintained for future reference.

### 2.3 Overview of COMAH Links and Required ERP Locations

Figure 2.3.1 below highlights the links between the COMAH Installation Annex reports and the ERP's and also shows where the completed sets of installation ERP's are to be maintained.

Fig.2.3.1 - COMAH Report Link to ERP's and Their Locations

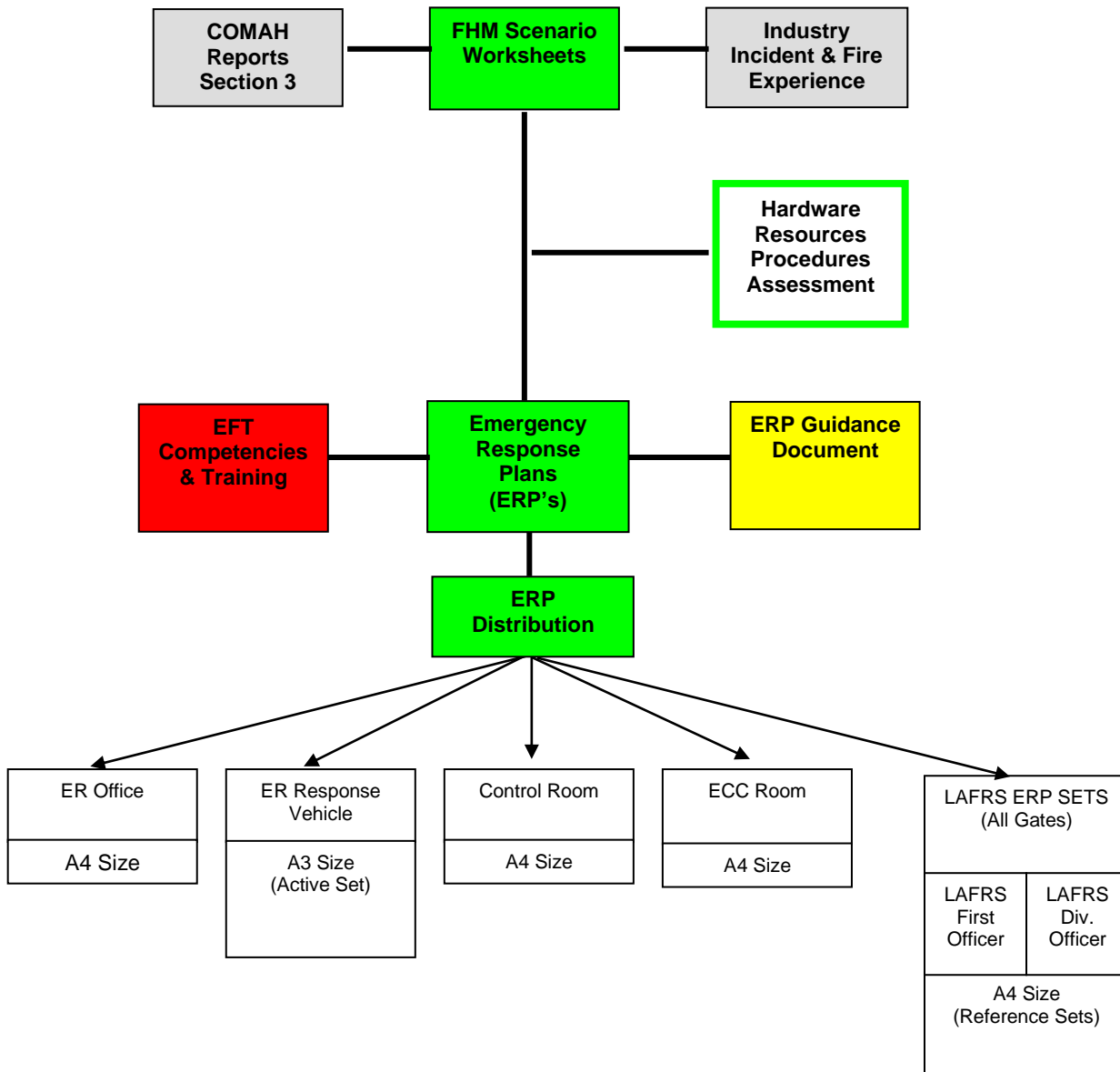


Fig 2.3.1 above indicates where the ERP's are to be held. Only one of the ERP's will be used as the “active” plan with this one carried and used by the ERT Leader, initially, then finally by the LAFRS senior officer at the incident scene.

The plant or installation control room personnel will use their copy of the relevant ERP for reference and advise the ERT that actions have (or have not) been carried out as applicable, but at all times, only the Response Vehicle ERP is to be used for recording the ERP listed actions and response. The other copies of the ERP exist for reference and information only at the other locations indicated.

A second set of ERP's are kept in the Access Gates and are there for pick-up by LAFRS and placement on the mobile Command Unit. This is to ensure that in the remote possibility of a 2nd major incident occurring, LAFRS will have immediate access to the relevant ERP for any installation if the EFT cannot attend.

Obviously, any 2nd major incident will have an IC and the LAFRS officer in charge will therefore assume the role of the IC in event of a 2nd major incident occurring, so far as the ERP actions are concerned.

## 2.4 *ERP Sections Explained*

The Emergency Response Plan is divided into key sections, or panels, as follows: -

The **“Strategy”** heading is a broad series of statements intended as guidance on what actions should be taken during the first 15 to 20 minutes to either minimise or control the consequences from a given incident. The strategy is taken from the incident scenario worksheets, which are also used to determine firewater flows, monitors, hose, foam concentrate, fire vehicles and manpower resources etc for the incident.

The **“1st Responders”** heading covers the immediate process control, personnel alerting, evacuation and assessment related tasks which are to be carried out by plant/installation technicians together with the equipment and resources required unless these are obvious. This heading also highlights functions for the Incident Controller.

The **“2nd Responders”** heading is intended primarily for the **IC, ERT Leader or ERT**, although further plant operator actions may be listed in some ERP's. The text here will usually be the recommended tactics/actions for minimising escalation potential or controlling or extinguishing the incident, together with the minimum equipment and resources identified as necessary to do so.

The **“3rd Responders”** heading is intended primarily for the LAFRS although it is anticipated, and indeed obvious, that both the ERT Leader /IC and LAFRS fire responders will work together. The text here will usually be the recommended tactics/actions for continuing the control or extinguishment, or in some cases, the evacuation of personnel at an incident.

The **“Incident Ongoing Hazards”** heading is used for any known hazards or hazardous events that may occur as a result of the incident. Information under this heading may include personnel exposure hazards, explosion potential, escalation hazards, gas migration hazards etc, etc.

The **“Other Concerns”** heading will normally highlight any other identified concerns including off-site considerations, incident control cautions, resources related concerns or other incident specific concern which has been noted during the course of the incident scenario evaluation work. This assists the responders in that it prompts early consideration or an early decision without having to wait for, or physically seek, sources of information.

The **“Radioactive Hazards / Asbestos Hazards / Toxic Hazards”** heading is used to list any of these hazards for a particular facility and, if present, to state where they are normally located. Radioactive sources locations will be highlighted using the recognised symbol.

## 2.5 *Training/Response Performance Measurement*

In addition to their use during an incident, the ERP's provide an effective means of measuring the emergency response performance, in terms of the logical and sequenced actions needed, time to carry out these actions, status of systems or equipment used for control actions etc, etc. The provision of effects maps enhances responder collective vision of the fire or gas cloud area, which better focuses the exercise when compared to “imaginary” areas.

Simulated incidents (local exercises) can be carried out at an installation, plant or facility. The actions performed by installation operators at a plant control room or at the CCR, as well as the plant outside general area, can be checked by exercise observers using the ERP.

The actions by fire responders at the simulated incident scene can also be checked against the ERP instructions and guidance.

In this way, the ERP's offer an objective and beneficial means of ensuring that operators and responders act in accordance with a structured and logical response plan and that they train together for incidents on the particular installation.