

NORTHERN IRELAND FIRE BRIGADE

OPERATIONS POLICY AND PERFORMANCE REVIEW



STANDARD OPERATING PROCEDURE NO 5

**PRE-PLANNING FOR INCIDENTS AT COMAH
ESTABLISHMENTS**

NORTHERN IRELAND FIRE BRIGADE

COMAH PROCEDURES

STANDARD OPERATING PROCEDURE NO



INDEX

PAGE

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PRE-PLANNING FOR INCIDENTS AT COMAH ESTABLISHMENTS

1 INTRODUCTION

- 1.1 The Control of Major Accident Hazards Regulations (Northern Ireland) applies to establishments which contain a dangerous substance in a quantity equal to or greater than that listed on Schedule 1 of the Regulations (see Appendix 'A'). This Schedule lists 2 quantities for each named or generic substance which relate to Lower Tier and Upper Tier Sites respectively.

2 LOWER TIER SITES

- 2.1 Those establishments with quantities equal to or greater than the lower entry but less than the higher entry are known as Lower Tier Sites. Under the Regulations the Operator of a Lower Tier Site is required to:
 - 2.1.1 Take all measures necessary to prevent major accidents and to limit their consequences on the environment.
 - 2.1.2 Have a Major Accident Prevention Policy.
 - 2.1.3 Notify the competent Authority, giving details in relation to the Operator, the Establishment and the Dangerous Substances.
- 2.2 The competent Authority means the Health and Safety Executive for Northern Ireland (the Executive) and the Department of the Environment for Northern Ireland, acting jointly.

3 TOP TIER SITES

- 3.1 Those establishments with quantities equal to or greater than the higher entry are known as Top Tier Sites. In addition to the requirements of Lower Tier Sites the Operator must also:
 - 3.1.1 Provide a Safety Report.
 - 3.1.2 Review and revise the Safety Report at least every 5 years.
 - 3.1.3 Have an On-site Emergency Plan.
 - 3.1.4 Review and test the plan at suitable intervals not exceeding 3 years.
 - 3.1.5 Implement the Emergency Plan, if necessary.
 - 3.1.6 Provide information to the public in the area of the site.

4 ROLE OF THE HEALTH AND SAFETY EXECUTIVE

- 4.1 The Executive shall arrange for the preparation of an Off-site Emergency Plan.
- 4.2 The Executive shall arrange for this plan to be tested at suitable intervals not exceeding 3 years.
- 4.3 The Executive may charge the Operator a fee for preparing and testing the plan and that fee may include any cost reasonably incurred by the Emergency Services in taking part in a test of the plan.
- 4.4 The Brigade will be involved in the preparation and testing of Emergency Plans and will also be required to ensure that Brigade Plans are adequate and personnel are trained to ensure that any incident at an establishment can be dealt with effectively.

5 STANDARD COMAH PLAN FRAMEWORK

- 5.1 The purpose of the attached Generic COMAH Plan is to provide a basis from which specific plans can be produced. It will help ensure an effective and consistent Fire Brigade contribution to any incident at an establishment that is subject to Regulations 7-14 of the Control of Major Accident Hazards Regulations (Northern Ireland). (COMAH Regulations Top Tier Establishments.)

- 5.2 Where appropriate, this plan may also be used to produce plans for establishments that are not subject to the COMAH Regulations, or are Lower Tier Sites. Such plans, however, must not refer to the specific COMAH terminology such as 'On-site/Off-site Plan', or 'COMAH Red', etc.
- 5.3 This framework is for the production of a Brigade Plan to compliment the 4(2)(d) Plan and may form part of the 'Off-site Plan', as required under Regulation 10.
- 5.4 A Standard Risk Assessment shall be completed and processed through the Health and Safety Policy Unit at Brigade Headquarters.
- 5.5 The pro forma should be used to produce specific plans as follows:

- 5.5.1 **INTRODUCTION**

- 5.5.2 **STANDARD RISK ASSESSMENT**

- 5.5.3 **SECTION 1**

- DEFINITION OF A 'COMAH RED' INCIDENT

- This should remain unchanged.

- 5.5.4 **SECTION 2**

- THE ROLE OF THE FIRE BRIGADE

- This should remain unchanged.

- 5.5.5 **SECTION 3**

- BRIGADE RESPONSE

- 3.1 Pre-Determined Attendance (PDA)

- Check and complete the appropriate PDA to an incident.

- 3.2 Control

- This should remain unchanged.

3.3 Incident Rendezvous Points (RVPs)

Complete the designated RVPs showing the locations and routes in Appendix '1'.

3.4 Marshalling Area(s)

Complete the designated Marshalling Area(s) showing the(their) location(s) in Appendix '1'.

5.5.6 **SECTION 4**

OPERATIONAL MANAGEMENT AT INCIDENT

This should be completed showing specific contacts, Forward Control Points/Incident Command Posts and communications details, etc.

5.5.7 **SECTION 5**

LIAISON

Details to be completed.

5.5.8 **SECTION 6**

INCIDENT INVESTIGATION

This should remain unchanged.

5.5.9 **SECTION 7**

THE MEDIA AND VISITORS

Specific media liaison details to be completed.

5.5.10 **SECTION 8**

BRIGADE SAFETY PROCEDURES

This should remain unchanged.

5.5.11 **APPENDIX '1'**

SITE MAP

This should be completed showing Rendezvous Points, Marshalling Areas and Forward Control Points (if necessary routes to these should be included).

5.5.12 **APPENDIX '2'**

ICP LOCATION PLAN

This should be completed showing the location and layout of the incident site in plan form.

5.5.13 **APPENDIX '3'**

HAZMAT DETAILS

This should be completed including a list of contact details, emergency telephone numbers, etc.

5.5.14 **APPENDIX '4'**

HAZMAT LOCATION PLAN(S)

Location and details of Hazmats should be included in plan form.

5.5.15 **APPENDIX '5'**

CHEMET FORMS

Include a copy of the 4(2)(d) card.

5.5.16 **APPENDIX '6' - END**

RISK CARD(S)

Functional role cards should be included as appropriate in accordance with the Incident Command standard operating procedure.

6 CONCLUSION

- 6.1 A Memorandum of Understanding may be agreed between the Brigade and the Operator of a COMAH Site to ensure effective co-operation between both parties in relation to Emergency Planning.
- 6.2 A copy of a pro forma for such an agreement is attached at Appendix 'B'. As the Brigade's Emergency Planning Co-ordinator, the Divisional Officer (Operations Policy) should be contacted to make the necessary arrangements for agreement between the Brigade and any other party in relation to Emergency Planning for COMAH establishments.
- 6.3 The generic framework for COMAH planning represents the first phase of the Brigade's policy of introducing site specific Risk Assessments and Emergency Plans which will contribute to a safer working environment for personnel.
- 6.4 Requests for information or guidance relating to COMAH Policy should be addressed, in the first instance, to the Assistant Divisional Officer (Emergency Planning) at the Operations Policy Unit, Brigade Headquarters.



DIVISIONAL OFFICER
(OPERATIONS POLICY)

2 February 2001

SCHEDULE 1

REGULATIONS 2(1)(7) AND 3(1)

**DANGEROUS SUBSTANCES
TO WHICH
THE REGULATIONS APPLY**

**(THIS SCHEDULE SETS OUT THE PROVISIONS
OF ANNEX 'I' OF THE DIRECTIVE)**

PART 1
INTRODUCTION

- 1 This schedule applies to the presence of dangerous substances at any establishment and determines the application of the relevant regulations in accordance with Regulation 3(1).
- 2 Mixtures and preparations shall be treated in the same way as pure substances, provided they remain within the concentration limits set according to their properties under the relevant provisions specified in Part 3, Note 1, unless a percentage composition or other description is specifically given.
- 3 The qualifying quantities set out in Parts 2 and 3 relate to each establishment.
- 4 The quantities to be considered for the application of the relevant regulations are the maximum quantities that are present at any one time. Dangerous substances present at an establishment only in quantities equal to or less than 2% of the relevant qualifying quantity shall be ignored for the purposes of calculating the total quantity present if their location within an establishment is such that it cannot act as an initiator of a major accident elsewhere on site.
- 5 The rules given in Part 3, Note 4 governing the addition of dangerous substances, or categories of dangerous substances, shall apply where appropriate.

PART 2
NAMED SUBSTANCES

Where a substance or group of substances listed in this part also falls within a category of Part 3, the qualifying quantities set out in this part must be used.

Column 1	Column 2	Column 3
Column 1	Column 2	Column 3
DANGEROUS SUBSTANCES	QUANTITY IN TONNES	
AMMONIUM NITRATE (AS DESCRIBED IN NOTE 1 OF THIS PART)	350	2,500
AMMONIUM NITRATE (AS DESCRIBED IN NOTE 2 OF THIS PART)	1,250	5,000
ARSENIC PENTOXIDE, ARSENIC (V) ACID AND/OR SALTS	1	2
ARSENIC TRIOXIDE, ARSENIOUS (III) ACID AND/OR SALTS	0.1	0.1
BROMINE	20	100
CHLORINE	10	25
NICKLE COMPOUNDS IN INHALABLE POWDER FORM (NICKLE MONOXIDE, NICKEL DIOXIDE, NICKEL SULPHIDE, TRINICKEL DISULPHIDE, DINICKEL TRIOXIDE)	1	1
ETHYLENEIMINE	10	20
FLUORINE	10	20
FORMALDEHYDE (CONCENTRATION = > 90%)	5	50
HYDROGEN	5	50
HYDROGEN CHLORIDE (LIQUEFIED GAS)	25	250
LEAD ALKYLs	5	50
LIQUEFIED EXTREMELY FLAMMABLE GASES (INCLUDING LPG) AND NATURAL GAS	50	200
ACETYLENE	5	50
ETHYLENE OXIDE	5	50
PROPYLENE OXIDE	5	50
METHANOL	500	5,000
4, 4-METHYLENEBIS (2-CHLORANILINE) AND/OR SALTS, IN POWDER FORM	0.01	0.01
METHYLISOCYANATE	0.15	0.15
OXYGEN	200	2,000
TOLUENE DIISOCYANATE	10	100
CARBONYL DICHLORIDE (PHOSGENE)	0.3	0.75
ARSENIC TRIHYDRIDE (ARSINE)	0.2	1
PHOSPHORUS TRIHYDRIDE (PHOSPHINE)	0.2	1

Column 1	Column 2	Column 3
DANGEROUS SUBSTANCES	QUANTITY IN TONNES	
SULPHUR DICHLORIDE	1	1
SULPHUR TRIOXIDE	15	75
POLYCHLORODIBENZOFURANS AND POLYCHLORODIBENZODIOXINS (INCLUDING TCDD), CALCULATED IN TCDD EQUIVALENT	0.001	0.001
THE FOLLOWING CARCINOGENS: 4-AMINOBIIPHENYL AND/OR ITS SALTS, BENZIDINE AND/OR SALTS, BIS(CHLOROMETHYL) ETHER, CHLOROMETHYL METHYL ETHER, DIMETHYLCARBAMOYL CHLORIDE, DIMETHYLNITROSOMINE, HEXAMETHYLPHOSPHORIC TRIAMIDE, 2-NAPHTHYLAMINE AND/OR SALTS, 1, 3 PROPANESULTONE AND 4-NITRODIPHENYL	0.001	0.001
AUTOMOTIVE PETROL AND OTHER PETROLEUM SPIRITS	5,000	50,000

NOTES

1 **AMMONIUM NITRATE (350/2,500)**

This applies to Ammonium Nitrate and Ammonium Nitrate compounds in which the Nitrogen content as a result of the Ammonium Nitrate is more than 28% by weight (compounds other than those referred to in Note 2) and to aqueous Ammonium Nitrate solutions in which the concentration of Ammonium Nitrate is more than 90% by weight.

2 **AMMONIUM NITRATE (1,250/5,000)**

This applies to simple Ammonium Nitrate-based fertilisers which conform with the requirements of the Fertilisers Regulations 1991(a) and to composite fertilisers in which the Nitrogen content as a result of the Ammonium Nitrate is more than 28% in weight (a composite fertiliser contains Ammonium Nitrate with Phosphate or Potash, or Phosphate and Potash).

4 **POLYCHLORODIBENZOFURANS AND POLYCHLORODIBENZODIOXINS**

The quantities of Polychlorodibenzofurans and Polychlorodibenzodioxins are calculated using the following factors:

INTERNATIONAL TOXIC EQUIVALENT FACTORS (ITEF) FOR CONGENERS OF CONCERN (NATO/CCMS)			
2, 3, 7, 8-TCDD	1	2, 3, 7, 8-TCDF	0.1
1, 2, 3, 7, 8-PeDD	0.5	2, 3, 4, 7, 8-PeCDF	0.5
		1, 2, 3, 7, 8-PeCDF	0.05
1, 2, 3, 4, 7, 8-HxCDD	0.1	1, 2, 3, 4, 7, 8-HxCDF	0.1
1, 2, 3, 6, 7, 8-HxCDD		1, 2, 3, 7, 8, 9-HxCDF	
1, 2, 3, 7, 8, 9-HxCDD		1, 2, 3, 6, 7, 8-HxCDF	
		2, 3, 4, 6, 7, 8-HxCDF	
1, 2, 3, 4, 6, 7, 8-HpCDD	0.01	1, 2, 3, 4, 6, 7, 8-HpCDF	0.01
		1, 2, 3, 4, 7, 8, 9-HpCDF	
OCDD	0.001	OCDF	0.001

(T = Tetra, P = Penta, Hx – Hexa, HP – Hepta, O = Octa)

PART 3

CATEGORIES OF SUBSTANCES AND PREPARATIONS NOT SPECIFICALLY NAMED IN PART 2

NO	Column 1	Column 2	Column 3
	CATEGORIES OF DANGEROUS SUBSTANCES	QUANTITY IN TONNES	
1	VERY TOXIC	5	20
2	TOXIC	50	200
3	OXIDISING	50	200
4	EXPLOSIVE [WHERE THE SUBSTANCE OR PREPARATION FALLS WITHIN THE DEFINITION GIVEN IN NOTE 2(a)]	50	200
5	EXPLOSIVE [WHERE THE SUBSTANCE OR PREPARATION FALLS WITHIN THE DEFINITION GIVEN IN NOTE 2(b)]	10	50
6	FLAMMABLE [WHERE THE SUBSTANCE OR PREPARATION FALLS WITHIN THE DEFINITION GIVEN IN NOTE 3(a)]	5,000	50,000

NO	Column 1	Column 2	Column 3
	CATEGORIES OF DANGEROUS SUBSTANCES	QUANTITY IN TONNES	
7(a)	HIGHLY FLAMMABLE [WHERE THE SUBSTANCE OR PREPARATION FALLS WITHIN THE DEFINITION GIVEN IN NOTE 3(b)(i)]	50	200
7(b)	HIGHLY FLAMMABLE LIQUIDS [WHERE THE SUBSTANCE OR PREPARATION FALLS WITHIN THE DEFINITION GIVEN IN NOTE 3(b)(ii)]	5,000	50,000
8	EXTREMELY FLAMMABLE [WHERE THE SUBSTANCE OR PREPARATION FALLS WITHIN THE DEFINITION GIVEN IN NOTE 3(c)]	10	50
9	DANGEROUS FOR THE ENVIRONMENT IN COMBINATION WITH RISK PHRASES:		
(i)	R50: 'VERY TOXIC TO AQUATIC ORGANISMS'	200	500
(ii)	R51: 'TOXIC TO AQUATIC ORGANISMS', AND R53: 'MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT'	500	2,000
10	ANY CLASSIFICATION NOT COVERED BY THOSE GIVEN ABOVE IN COMBINATION WITH RISK PHRASES:		
(i)	R14: 'REACTS VIOLENTLY WITH WATER' (INCLUDING R14/15)	100	500
(ii)	R29: 'IN CONTACT WITH WATER, LIBERATES TOXIC GAS'	50	200

NOTES

- Substances and preparations shall be classified for the purposes of this schedule according to Regulation 5 of the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994(a) whether or not the substance or preparation is required to be classified for the purposes of those regulations, or, in the case of a pesticide approved under the Food and Environment Protection Act 1985(b), in accordance with the classification assigned to it by that approval.

In the case of substances and preparations with properties giving rise to more than one classification, for the purposes of these regulations the lowest thresholds shall apply.

2 An **'explosive'** means:

- (a)
 - (i) A substance or preparation which creates the risk of an explosion by shock, friction, fire or other sources of ignition (risk phrase R2).
 - (ii) A pyrotechnic substance is a substance (or mixture of substances) designed to produce heat, light, sound, gas or smoke or a combination of such effects through non-detonating self-sustained exothermic chemical reactions.
 - (iii) An explosive or pyrotechnic substance or preparation contained in objects.
- (b) A substance or preparation which creates extreme risks of explosion by shock, friction, fire or other sources of ignition (risk phrase R3).

3 **'Flammable', 'highly flammable', and 'extremely flammable'** in categories 6, 7 and 8 mean:

(a) **Flammable Liquids**

Substances and preparations having a flash point equal to or greater than 21°C and less than or equal to 55°C (risk phrase R10), supporting combustion.

(b) **Highly Flammable Liquids**

- (i) Substances and preparations that may become hot and finally catch fire in contact with air at ambient temperature without any input or energy (risk phrase R17).

Substances that have a flash point lower than 55°C and which remain liquid under pressure, where particular processing conditions, such as high pressure or high temperature, may create major accident hazards.

- (ii) Substances and preparations having a flash point lower than 21°C and which are not extremely flammable (risk phrase R11, second indent).

(b) **Extremely Flammable Gases and Liquids**

- (i) Liquid substances and preparations which have a flash point lower than 0°C and the boiling point (or, in the case of a boiling range, the initial boiling point) of which at normal pressure is less than or equal to 35°C (risk phrase R12, first indent).
- (ii) Gaseous substances and preparations which are flammable in contact with air at ambient temperature and pressure (risk phrase R12, second indent), whether or not kept in the gaseous or liquid state under pressure, excluding liquefied extremely flammable gases (including Liquefied Petroleum Gas and Natural Gas referred to in Part 2).
- (iii) Liquid substances and preparations maintained at a temperature above their boiling point.

- 4 The addition of dangerous substances to determine the quantity present at an establishment shall be carried out according to the following rule:

If the sum

$$q_1/Q + q_2/Q + q_3/Q + q_4/Q + q_5/Q + \dots > 1$$

where q_x = the quantity of dangerous substances x (or category of dangerous substances) falling within Parts 2 or 3 of this schedule,

Q = the relevant threshold quantity from Parts 2 or 3,

then the establishment is covered by the relevant requirements of these regulations.

This rule will apply for the following circumstances:

- (a) For substances and preparations appearing in Part 2 at quantities less than their individual qualifying quantity present with substances having the same classification from Part 3 and the addition of substances and preparations with the same classification from Part 3.
- (b) For the addition of categories 1, 2 and 9 present at an establishment together.
- (c) For the addition of categories 3, 4, 5, 6, 7(a), 7(b) and 8, present at an establishment together.

MEMORANDUM OF UNDERSTANDING

BETWEEN THE FIRE AUTHORITY FOR NORTHERN IRELAND

AND

(NAME OF COMPANY)

ON

TRAINING ISSUES IN RELATION TO EMERGENCY PLANNING

FOR

(NAME AND ADDRESS OF ESTABLISHMENT)

**AND INCIDENTS INVOLVING SIMILAR HAZARDS
AS THOSE PRESENT AT THE ESTABLISHMENT**

1 INTRODUCTION

The purpose of this Memorandum of Understanding (MoU) is to ensure effective co-operation between the Fire Authority for Northern Ireland and (name of company) on training in relation to emergency planning for (name and address of establishment) and for incidents involving similar hazards as those present at the establishment.

It aims to provide mutually beneficial co-operation in the provision of economic but effective training and exercising.

2 RELEVANT LEGISLATION

Regulation 9 of the Control of Major Accident Hazards Regulations (Northern Ireland) requires the operator of the site to prepare an On-site Emergency Plan.

Regulation 10 requires the Health and Safety Executive for Northern Ireland (the Executive) to prepare an Off-site Emergency Plan.

Regulation 11 requires review and testing of emergency plans at suitable intervals not exceeding 3 years.

Regulation 13 allows the Executive to charge the Operator a fee for the testing of the Off-site Plan and the fee may include the costs reasonably incurred in arranging for the emergency services to participate in the test.

3 TRAINING

(Name of company) agree that where reasonably practical, they will co-operate with the Northern Ireland Fire Brigade (NIFB) to ensure that any exercises planned under the COMAH Regulations meet the training objectives of the Brigade and that facilities/expertise will be provided to assist the Brigade with training events in relation to the establishment. Where practical and possible, the company will also assist the Brigade, without charging a fee, in providing expertise in relation to any incident or training involving hazards similar to those at the establishment. Whilst this MoU is in force, the Fire Authority for Northern Ireland agrees that no fees will be charged in relation to NIFB personnel and equipment participating in any planned exercises to test emergency plans.

4 GENERAL

Both parties reserve the right to withdraw from this MoU by notifying the other. Any such withdrawal will be confirmed, in writing.

**FOR FIRE AUTHORITY FOR
NORTHERN IRELAND**

**FOR
(NAME OF COMPANY)**

SIGNED ON BEHALF OF FANI
POSITION: CHIEF FIRE OFFICER

SIGNED ON BEHALF OF
(COMPANY)
POSITION:

DATE: _____

DATE: _____