

Seveso III: Implementation Update
Engineers Ireland
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Seveso III: Issues and Challenges for Operators

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Overview

- Introduction to AWN Consulting Ltd.
- 2015 COMAH Regulations and application thereof
- Main provisions for operators
- What has changed?
- Important dates for operators
- Summary of challenges

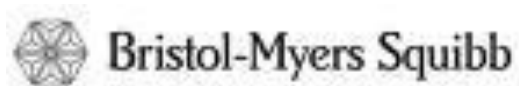
Brief Introduction

- Maeve McKenna, Principal Risk Consultant, Awn Consulting
- Dr Fergal Callaghan Director EHS
- Multi-disciplinary EHS Consultancy
- 28 Consultants – 4 working full time on Seveso, GHS. CLP, Chemical Agents Risk Assessment and ATEX
- Work for US multi-national and Irish client base in Ireland and abroad, including pharma, oil and gas, chemical storage and processing, semi-conductor, explosives
- Also work for Local Authorities (Fire and Emergency Services) An Bord Pleanála as Technical Inspector

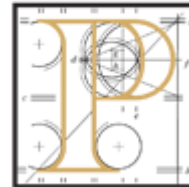
Services AWN provide

- Classification of hazardous materials;
- HAZID and HAZOP Studies;
- Consequence & Risk Modelling (DNV PHAST, TNO Effects and Riskcurves);
- Quantitative Risk Assessment (QRA) (Individual and Societal);
- Preparation of Safety Reports;
- Land Use Planning Assessments;
- SDS troubleshooting and preparation;
- Accident Investigation;
- Organisation Change Risk Assessment;
- ATEX;
- CLP and GHS

Some recent Clients



An Bord Pleanála



2015 COMAH Regulations

- The Seveso III Directive came into operation as of 1 June 2015 via the **Chemicals Act, Control of Major Accident Hazard Regulations 2015**
- Alignment of dangerous substances covered by the EU Classification, Labelling and Packaging Regulation which replaces risk phrases with hazard statements and introduces a new system for classifying and labelling substances and mixtures
- 2015 Regulations also introduce a number of changes for operators

Application of the 2015 COMAH Regulations

- Schedule 1 Part 1 lists 21 categories of dangerous substance under groups of:
 - Health Hazards – classification criteria have changed for acute toxic categories, and STOT SE 1 category is new,
 - Physical Hazards – new categories include flammable aerosols and self reactive substances mixtures and organic peroxides, lower thresholds for high flashpoint flammable liquids kept above their boiling point and processed under hazardous conditions,
 - Environmental Hazards
 - Other Hazards

Application of the 2015 COMAH Regulations

- Schedule 1 Part 2 lists 48 named substances and mixtures, 16 of which are new

Column 1	CAS number	Column 2	Column 3
		Lower tier threshold (t)	Upper tier threshold (t)
18. Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas (see note 19),	•	50	200
34. Petroleum products and alternative fuels (d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	-	2,500	25,000
35. Anhydrous ammonia	7664-41-7	50	200
36. Boron trifluoride	7637-07-2	5	20
37. Hydrogen sulphide	7783-06-4	5	20
38. Piperidine	110-89-4	50	200
39. Bis(2-dimethylaminoethyl) (methyl)amin	3030-47-5	50	200
40. 3-(2-Ethylhexyloxy)propylamin	5397-31-9	50	200
41. Mixtures (*) of sodium hypochlorite classified as Aquatic Acute Category 1 [H400] containing less than 5 % active chlorine and not classified under any of the other hazard categories in Part 1 of Schedule 1. (*) Provided that the mixture in the absence of sodium hypochlorite would not be classified as Aquatic Acute Category 1 [H400].		200	500
42. Propylamine (note 21)	107-10-8	50	2,000
43. Tert-butyl acrylate (see note 21)	1663-39-4	20	500
44. 2-Methyl-3-butenenitrile (see note 21)	16529-56-9	50	2,000
45. Tetrahydro-3,5-dimethyl-1,3,5,-thiadiazine-2-thione (Dazomet) (see note 21)	533-74-4	100	200
46. Methyl acrylate (see note 21)	96-33-3	500	2,000
47. 3-Methylpyridine (see note 21)	108-99-6	500	2,000
48. 1-Bromo-3-chloropropane (see note 21)	109-70-6	500	2,000

Main provisions for operators

Provision	2015 COMAH Regs	2006 COMAH Regs	Lower Tier Establishment	Upper Tier Establishment
General Duties (including HAZID and QRA)	7	8	✓	✓
Notification	8	11	✓	✓
Domino effects	9	9(3)	✗	✓
MAPP and SMS	10	10	✓	✓
Safety Report	11	12	✗	✓
Modifications	12	-	✓	✓
Internal Emergency Plan	13, 14, 15	15	✗	✓
External Emergency Plan	13, 14, 16, 17	16	✗	✓
Land use planning	24	27	✓	✓
Provision of information to the public	25	18	✓	✓
Access to information and confidentiality	26	34	✓	✓

2015 COMAH Regulations

What has changed?

- Notification
- Major Accident Prevention Policy and Safety Management System
- Safety report
- Modifications
- Emergency response plans
- Provision of information to the public
- Access to information and confidentiality

Notification

- The HSA will only accept notifications made using the electronic notification form
- To be submitted at least 3 months prior to construction, operation or modifications leading to a change in inventory
- How significant does the change in inventory need to be to require re-notification?
- The notification form will also be used to collect the information to be provided to the public and for the development of technical land use planning advice
- Operators will be required to have completed hazard identification studies, consequence modelling and QRA **prior to notification** in order to provide this information

MAPP and SMS

- Lower tier sites are now required to send the MAPP to the CCA
- The Safety Management System shall be "proportionate to the hazards, industrial activities and complexity of the organisation in the establishment" and shall be based on assessment of risks
- The organisation and personnel part of the SMS to address measures taken to raise awareness of the need for continuous improvement
- There is an absolute requirement for safety performance indicators

Safety Report (Upper Tier Sites)

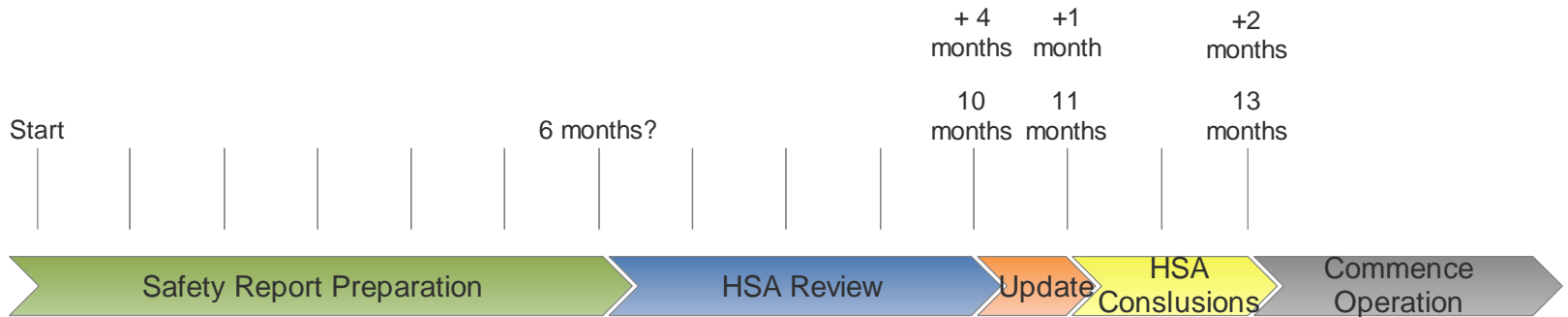
- Contains a description of the facility and installations with major accident hazard potential, the HAZID (including consequence modelling and QRA), the MAPP and SMS, the design standards for the facility and its processes and the emergency response plan.
- The description of the installation should take into account available information on best practice
- Include a review of past accidents and incidents with the same substances and processes used, consideration of lessons learned from these, and to specific measures taken to prevent such accidents
- The EPA will be involved in reviewing major accidents to the environment
- Will the CCA provide up to date Safety Report guidance?

Safety Report Timeline

- For new establishments, the Safety Report is to be submitted four months prior to start of construction or operation or prior to modifications leading to a change in the inventory of dangerous substances, CCA will communicate conclusions or seek further information within 4 months
- Existing upper tier establishments to submit an updated safety report by 1 June 2016
- An operator shall not begin construction, operation, or implement modifications leading to a change in the inventory of dangerous substances until it has received the conclusions and permission from the CCA
- Does this also apply to “significant modifications”?

Safety Report Timeline

- The timelines for obtaining approval of the Safety Report may have significant implications for commencement of construction and operation of new establishments - as this process will typically take 7 months.
- For a new establishment, the safety report approval process could potentially impact the project timescale by over a year:



Modifications and Land Use Planning

- Prior to a significant modification including change to form or quantity of dangerous substances which could have significant consequences for major accident hazards, operator to review and update the notification, MAPP and Safety Report
- Operator to inform the CCA of details of updates in advance of modifications taking place and in “sufficient time” to allow the CCA to carry out its functions under Regulation 24 (land use planning)
- The CCA will decide if the modification constitutes a “significant change” and may request additional technical measures to be included or may refer the proposed change to the planning authority with relevant technical advice

Modifications and Land Use Planning

- The planning authority will make a determination on not development, exempted development, planning permission required
- In some cases, modifications will require planning permission to be obtained for developments that would otherwise be below the planning threshold
- The operator may not carry out modification until technical measures have been put in place or planning authority confirms not development, exempted development or planning permission is obtained
- Question for HSA: What timelines are involved for these steps?

Emergency Response Plans

- More emphasis on domino effects
- The IEP must be prepared in consultation with personnel on site as well as Local Competent Authorities (Fire Service, Ambulance Service and An Garda Síochána)
- IEP and EEP to be tested every 3 years
- Greater provision for public participation in the External Emergency Planning process

Provision of information to the public

- **All establishments** are required to make information permanently available to the public, including by electronic means as per Schedule 5 Part 1 (all sites) and Part 2 (upper tier sites)
- It is now required to make information on inspections available to the public
- For upper tier establishments the inventory of dangerous substances and safety report should be made available to the public on request (subject to regulation 26)
- Operators of upper-tier establishments to communicate with persons likely to be affected by a major accident

Provision of information to the public

- The specified area is no longer used – previously defined the area within which operators were required to communicate directly with members of the public and was based on the area within which the individual risk of fatality equated to $1E-07$ per year, derived from QRA. The CCA will notify the operator of the extent of this area – what criteria will be used?
- Will operators be required to provide information to larger populations?
- The operator must consult with the LCAs on the suitability of such information to be provided by upper tier sites
- To be provided within 6 months of the Regulations coming into force, in the event of modifications and updated every 5 years

Access to information and confidentiality

- Information held by a competent authority is treated as environmental information and subject to Access to Information on the Environment (AIE) Regulations (2007 to 2014)
- For safety reports, this applies only where the CCA have communicated their conclusions
- Technical land use planning advice provided by the CCA is considered public information
- The AIE regulations include discretionary grounds for refusal (including commercial confidentiality and intellectual property rights)
- A request for environmental information shall not be refused where the request relates to information on emissions into the environment (such as a major accident)
- How much protection is really provided to commercially confidential information?

Important dates for existing operators

Provision	Date
Notification	within 12 months, by 1 st June 2016
MAPP and SMS	within 12 months, by 1 st June 2016
Safety Report	update within 12 months, 1 st June 2016 5 year review as per date given under 2006 Regs
Internal Emergency Plan	within 12 months, by 1 st June 2016
Provision of EEP information to LCA	within 12 months, by 1 st June 2016

Important dates for new operators

Provision	Date
Notification	3 months prior to start of construction or operation or modification
MAPP and SMS	1 month prior to when the COMAH Regulations apply
Safety Report	4 months prior to start of construction, operation, or the modification
Internal Emergency Plan	1 month prior to start of construction or operation or the modifications leading to a change in the inventory of dangerous substances
Provision of EEP information to LCA	1 month prior to start of operation, or modification

Summary: Main challenges

- Notification:
 - How significant does the change in inventory need to be to require re-notification?
 - Provision of information for technical LUP
 - Operators will be required to have completed hazard identification studies, consequence modelling and QRA **prior to notification** in order to provide this information
- Safety report (upper tier sites)
 - Will updated guidance be issued?
 - Implications for project timescales
 - Will safety report sign off be required before significant modifications can commence?

Summary: Main challenges

- Modification planning process,
 - HSA/competent authority review and approval process and timelines
 - N.B. plan for change and update all Seveso related documents
- Emergency response planning process: greater involvement of local competent authorities
- Provision of information to the public: what criteria will the HSA use in defining who could be affected by a major accident?
- Access to information and confidentiality: how much protection is really afforded by the AIE Regulations to commercially confidential information and intellectual property?