

2005-2006 BIENNIAL REPORT FROM THE COMAH COMPETENT AUTHORITY



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Introduction

This report provides a summary of events of significance for the COMAH regime, together with details of key pieces of work undertaken by the COMAH Competent Authority (CA) during the 2005 and 2006 calendar years. It is provided for the information of anyone with an interest in the regulation of on-shore major hazards at sites falling within scope of the COMAH Regulations.

LEGISLATION

(1) The Control of Major Accident Hazards (Amendment) Regulations 2005

The COMAH Amendment Regulations came into force on 30 June 2005. The main effect of the amendments was to broaden the scope of COMAH through changes to Part 2 and Part 3 of Schedule 1. The changes reflected lessons learned from major accidents in Europe since COMAH was introduced, including the series of explosions at a fireworks company in Enschede in the Netherlands in May 2000, and the explosion at a fertiliser plant in Toulouse, France, in September 2001, as well as the results of EC working groups on carcinogens and substances dangerous for the environment.

In particular, the amendments included:

- The addition of new named substances;
- Changes to some existing named substances and generic categories of substance, including revised qualifying quantities; and
- Changes to the aggregation rule.

There was also a broadening of scope with respect to mining and quarrying.

Detailed guidance on the changes is available on the COMAH pages of the HSE website - <http://www.hse.gov.uk/comah/background/summary.pdf>.

The Regulatory Impact Assessment recognised uncertainties in estimating costs and benefits of the Regulations, including the number of sites that could be affected by the changes. It estimated that these amendments would result in 123-140 sites entering COMAH at the lower tier, approximately 18 sites entering COMAH at the top tier, and 83-91 sites moving from lower tier to top tier status. However, indications are that the actual numbers are considerably lower than these estimates.

(2) CHIP 3.1 – The Chemicals (Hazard Information and Packaging for Supply) (Amendment) Regulations 2005

The CHIP Regulations provide the basis for the classification of dangerous substances and preparations, which is used, in part, to determine the application of COMAH. The Regulations implement the EC Dangerous Substances Directive (67/548/EEC) and the Dangerous Preparations Directive (199/45/EC) relating to the classification, packaging and labelling of

dangerous substances. Periodic revisions are made to the technical annexes to these Directives by means of Adaptations to Technical Progress (ATPs).

CHIP 3.1 came into effect on 31 October 2005 and implements the 29th ATP to the Dangerous Substances Directive. Key effects were changing the classification of a number of dangerous substances in the Approved Supply List (ASL) from toxic (T) to very toxic (T+), with a consequent reduction in their COMAH thresholds, and introducing a number of newly classified T+ substances to the ASL for the first time.

Of particular note was the reclassification of chromium (vi) trioxide from toxic to very toxic, which was expected to bring some surface treatment sites within scope of COMAH. This has not proved to be a straightforward issue because although chromium trioxide in flake or crystal form is classified as T+, once dissolved in water it forms chromic acid.

The terms chromium trioxide and chromic acid have been used synonymously in the surface engineering industry, which has led to confusion as to whether chromic acid should have the same very toxic classification as chromium trioxide, and there is some evidence to support the view that it should. There has been considerable discussion (including at EC level) over the correct classification of baths containing chromic acid and consequent Seveso/COMAH application. **This has yet to be resolved at a European level and is still under discussion.**

Until this issue is resolved, the UK Competent Authority (CA) is taking the view that the previous classification for chromic acid (i.e. the generic classification: dangerous for the environment R50/53 'very toxic to aquatic organisms') should be applied to chromium trioxide dissolved in plating baths and not the new T+ threshold.

The CA has been working with the surface engineering industry to raise awareness of these issues, and promote a consistent and proportionate approach to the application of COMAH at surface treatment sites, consistent with the level of risk they represent. For further guidance see: "Surface Engineering, COMAH Application and Main Duties", which is available on the HSE web site - <http://www.hse.gov.uk/surfaceengineering/mainduties.pdf>.

(3) Revision of Published Guidance on the COMAH Regulations

To coincide with the COMAH Amendment Regulations and CHIP changes described above, work was carried out during 2005 to produce a revised version of L111: "A Guide to the Control of Major Accident Hazards Regulations 1999 (as amended)" (ISBN 0-7176-6175-X), which was published in 2006.

The guidance gives detailed advice on the revised scope of the Regulations and the duties imposed by them. Copies are available from HSE Books and from bookshops.

(4) 2nd ATP to the Dangerous Preparations Directive

This was adopted on 23 January 2006 and was due to enter into legal effect in EU Member States on 1 March 2007 (see HSE website for current status) - <http://www.hse.gov.uk/chip/issues.htm#updates>. It extends to very low levels the generic concentration limits used to classify preparations as Dangerous for the Environment. This will result in products containing small quantities of powerful biocides, such as standard emulsion paints (typical content 0.1 to 0.5%) and antifungal paints and wood preservatives (typical content 0.5 to 5.0%), being classified and labelled as Dangerous for the Environment. An unintended consequence of this is that the COMAH Regulations will apply to any sites storing more than the generic qualifying quantities of these products, as specified in Schedule 1, Part 3 of COMAH, namely:

9. Dangerous for the Environment	Quantity in tonnes	
	Lower tier	Upper tier
(a) R50 (with or without R53)	100	200
(b) R51/53	200	500

These threshold quantities could be exceeded in larger DIY stores or in warehouses, bringing these premises within scope of COMAH.

These changes give rise to a situation where a site storing 99 tonnes of pure biocide would not attract COMAH, whereas a warehouse storing 100 tonnes of emulsion paint containing only 0.5 tonne of the biocide (if present at 0.5%) would fall within scope. This is clearly anomalous and much work was undertaken during 2006 and 2007 to identify the extent of the problem and to consider possible solutions. In the longer term, it is hoped to address this problem through amendment of the Seveso II Directive (and consequent amendment of COMAH). However, this could take several years and work is continuing to decide on the most appropriate way to deal with such sites in the interim. In the meantime, HSE is exploring the possibility of a minor amendment to the enforcement provisions in COMAH which would allow, in cases as agreed between HSE and the LA, the transfer of enforcement responsibility for non-COMAH HSWA legislation back to the local authority.

(5) Negotiation of 30th ATP to the Dangerous Substances Directive

During the course of the year CA representatives took part in EC negotiations on the 30th ATP to the Dangerous Substances Directive. In support of this work a project was commissioned with the Health & Safety Laboratory (HSL), to look at the implications of the 30th and 31st ATPs for the COMAH Regulations. The aim of the project was to identify how the ATPs, when implemented through the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP), would affect the scope of the COMAH Regulations, and to provide the CA with early and coordinated intelligence on the industry sectors/businesses likely to be affected by the changes. Although the 30th ATP was originally expected to be voted on within the EC by the end of 2005, due to a series of delays voting had not taken place by the end of 2006, which caused a knock-on delay to the HSL project. Progress on

the draft 31st ATP has been similarly delayed at EC level but initial work by HSL suggested that up to three times the number of substances in that ATP may be relevant to COMAH. Guidance on the current status of the 30th and 31st ATPs is available on the HSE web site - <http://www.hse.gov.uk/chip/issues.htm#updates>.

SAFETY REPORTS

(6) Review and Revision of COMAH Safety Reports

To coincide with the 5th anniversary of the first COMAH safety reports submitted, the CA produced guidance for inspectors on review and revision of safety reports under regulation 8 of COMAH in the first half of 2005. This followed on from guidance for operators on review and revision of COMAH safety reports that was published on the HSE website in Autumn 2004.

The guidance was in two parts: Firstly, advice on the action inspectors need to take to ensure effective review and revision is carried out; and secondly, interim guidance on the procedures for assessment of revisions to safety reports, for eventual incorporation into the Safety Report Assessment Manual (SRAM) – see item (7) below.

One of the aims of the new guidance was to encourage more interim review and revision of safety reports, at the time of on site changes with possible significant repercussions for the control of major accidents, thereby shifting the emphasis away from 5-yearly review and revision. In support of this aim, paragraphs (a) and (c) in regulation 8(1) of COMAH were transposed under the COMAH (Amendment) Regulations described at item (1) above. The order in which the requirements for review and revision now appear under regulation 8(1) is:

- (a) whenever the operator makes a change to the safety management system ... which could have significant repercussions with respect to the prevention of major accidents or the limitation of consequences of major accidents to persons and the environment;
- (b) whenever such a review is necessary because of new facts or to take account of new technical knowledge about safety matters; and
- (c) fully at least every 5 years.

A further amendment to the COMAH Regulations changed the requirement on operators to “inform” the CA of details of revisions to safety reports (under regulations 8(1) and 8(4)(b)), and of instances where safety reports have been reviewed but not revised at the 5-year stage (regulation 8(2)), to a duty to “notify” the CA. The effect of this change is to require details of review and revision activity to be submitted to the CA in writing (including in an e-mail).

(7) SRAM Revision Project

A project was commenced in September 2005, to revise the COMAH safety report assessment manual (SRAM). There was an identified need to rewrite the manual to take account of reviews of the way in which the assessment process had been working and feedback received from assessors, site operators and other stakeholders. There was also a need to take account of the following developments:

- A high proportion of assessment work will now be completed on revisions of previous reports.
- There is a need to ensure a proportionate, risk-based approach to assessment and the avoidance of duplication of work.
- The COMAH (Amendment) Regulations 2005 and CHIP 3.1 (see items (1) and (2), above) have brought a number of new sites into scope.

A project team was set up to carry out the work and a workshop was held in December 2005, to seek the views of CA staff involved in safety report assessment work on the changes proposed and early drafts of key sections of the new manual. A second workshop was held in February 2006, to give CA staff a further opportunity to comment on the proposed changes. Issues raised at the workshops were taken into account by the Project Team when producing the final version of the new SRAM, which was completed on schedule at the end of March 2006. The new SRAM was published on the HSE web site - <http://www.hse.gov.uk/comah/sram/index.htm> and was rolled-out across the CA through a series of training workshops held during May and June 2006. It has been applied to the assessment of all safety reports (including initial submissions and revisions to existing reports) received since 1 July 2006.

Some of the most significant changes introduced include:

1. Reducing the timescale for carrying out assessments from 12 months to 6 months. All assessments to be commenced within 6 months of receipt, and completed within 6 months of commencement, such that the maximum time between receipt of a report and completion of assessment should not exceed 12 months.
2. Only 1 coordinated request for further information to be made, with the emphasis on requesting information that should already be available. In the past, operators have been allowed prolonged periods to undertake further work in order to provide additional information. In future, further information requests are no longer to be used as a means to require additional work. Where the requested information cannot be provided within approximately 4 weeks, the assessment will be concluded without it.
3. Where significant shortfalls remain in the demonstrations required to be made in the safety report (COMAH Schedule 4, Part 1) by the end of the assessment process, a revision plan will be issued, detailing the action needed to bring the report up to an acceptable standard.

4. New guidance incorporated on proportionality and targeting of assessments.
5. Discipline specific guidance provided on process safety, mechanical engineering, control and instrumentation and human factors.
6. Criteria on environmental assessment included for the first time (not intended to change the way in which environmental assessments are carried out but to make the basis for environmental assessment more explicit).
7. The key principles governing safety report assessment set out at the front of the manual, preceded by a statement from senior managers within all parts of the CA, endorsing the approach to assessment as set out in the new manual.
8. Procedures and assessment criteria set out in a clear tabular format.

(8) Revised guidance from the EC on the preparation of safety reports

During the course of 2005, work that was started in 2004 to revise the EC “Guidance on the Preparation of a Safety Report” (ISBN 92-79-01301-7) was completed. Much of the work was undertaken by staff at the Major Accident Hazards Bureau (MAHB), which is based at the EC Joint Research Centre in Ispra, Italy. Member states were consulted on the structure and content of the revised guidance via a working group, which included a representative from the UK. The final version of the guidance was accepted (subject to a few minor amendments) at a meeting of the Committee of Competent Authorities (CCA) in Buxton, England, in October 2005.

The original version of the guidance was developed in parallel with the legislative process leading to the Seveso II Directive (96/82/EC), on the basis of experience gained in implementing the preceding Seveso Directive (82/501/EEC). As such, it was not well tailored to the requirements of Seveso II. The 2003 amendment to the Seveso II Directive included an addition to Article 9(6), inviting the Commission to review by 31 December 2006, in close cooperation with the Member States, the existing “Guidance on the Preparation of a Safety Report”. This was considered necessary in order to produce guidance that more closely followed the requirements of Seveso II, and to reflect experience gained in the preparation of safety reports in the period since implementation of the Directive in Member States.

The guidance is high level and overarching in nature, sitting above HSG190: “Preparing safety reports: Control of Major Accident Hazards Regulations 1999”. It is intended to give an authoritative interpretation of the meaning of the Directive to assist stakeholders (namely, operators of Seveso-type (i.e. COMAH top tier) establishments, competent authorities, and consultants involved in the production of safety reports) with the interpretation of the requirements relating to the preparation of safety reports in the Seveso II Directive and its amendment.

(9) HSE Project on Emergency Planning and Provision of Information to the Public

This project was due to complete in March 2006 and had 2 elements to it. Firstly, there was a requirement for relevant field teams in HSE to complete a spreadsheet with details of action taken by operators of top tier COMAH sites to provide information to the public in compliance with regulation 14 of COMAH. In the event, this information proved difficult to collect and at the time of writing insufficient information had been obtained to enable meaningful analysis.

The second part of this project involved a survey of Emergency Planning Authorities (EPAs) to gather information on the preparation and testing of off-site emergency plans under regulations 10 & 11 of COMAH. It was intended that information gathered would inform field teams' regular and ongoing discussions with Emergency Planning Officers, including timescales for the completion of any outstanding plans (though no special visits were required). It was also intended that information on the type of testing would be used to inform discussions and proposed guidance on what constitutes adequate testing of off-site emergency plans, which is a current issue for the COMAH and Pipelines Emergency Planning Liaison Group (CAPEPLG). This aspect of the project was somewhat overtaken by events when the UK, along with 21 other Member States, received a pre-Article 226¹ letter from the EC in March 2006, requesting an update on the number of top tier sites with external emergency plans.

A pre-Article 226 letter is used by the EC to gather information to inform a decision on whether or not to instigate infraction proceedings against a Member State. The 2000-2002 report to the EC indicated that only 45.1% of top tier sites in the UK had off-site plans in place by the end of 2002, despite the fact that 100% of plans were required to be in place by February 2002 (3 years after the deadline for transposition of the Seveso II Directive into national legislation). By early 2004 this figure had increased to only 54.7% and the pre-Article 226 letter requested the observations of the CA within 2 months. In reply, the CA was able to confirm to the EC that it had carried out a considerable amount of work since 2004, to ensure that there had been a significant increase in the number of external emergency plans in place, and

¹ Article 226

If the Commission considers that a Member State has failed to fulfill an obligation under the EC Treaty (in this case by failing to properly implement the provisions of the Seveso II Directive relating to off-site emergency plans), it will write to the State concerned (an Article 226 letter), giving it the opportunity to submit its observations, after which time it may, if appropriate, deliver a reasoned opinion on the matter. If the State concerned does not comply with the opinion within the period laid down by the Commission, the latter may then bring an infringement case before the European Court of Justice. Prior to taking any of this action, the Commission may write to the Member State (a so-called pre-Article 226 letter), to enquire about the current situation. Depending on the response received, the Commission may or may not instigate the full Article 226 procedure described.

that 95.8% of COMAH establishments that required an off-site emergency plan (343 out of 358 sites) had one in place by May 2006.

INTERNATIONAL WORK

(10) Overview of work carried out in 2005

During the course of 2005, representatives of the CA were involved in a number of pieces of work for the OECD (Organisation for Economic Cooperation and Development) and UNECE (United Nations Economic Commission for Europe), which are summarised briefly below:

- Provided UK report to UNECE on implementation of the Convention on the Transboundary Effects of Industrial Accidents for the period 2004-2005. The UK complies with the Convention largely through implementation of the COMAH Regulations.
- Attended a meeting in Rome in October 2005 for points of contact and national experts for the UNECE Industrial Accident Notification (IAN) System to discuss changes to the operation of the system and UK involvement in exercises to test the system.
- Provided written comments to the second meeting of the working group on the development of proposed changes to Annex 1 of the Convention on the Transboundary Effects of Industrial Accidents, our view being to support an option that provides for greater clarity and consistency with Annex I of Seveso II which is central to determining application of the Convention.

(11) Response to OECD Council Act Recommendation Concerning Chemical Accident Prevention, Preparedness and Response

The Council of the OECD published a Recommendation in January 2004, aimed at encouraging member countries to establish or strengthen national programmes for the prevention of, preparedness for, and response to accidents involving hazardous substances. Although not legally binding, Council Act Recommendations are expressions of political will to follow certain policies.

In 2006 member countries were asked to complete a questionnaire, to aid evaluation of the effectiveness of this Act, and this was completed by HSE on behalf of the UK. The UK response showed good levels of compliance across all areas of the Recommendation and also identified where barriers may hinder further improvements.

(12) UK Lead on OECD Safety Report Project

During 2006 the UK took the lead on a project on the *Use of Safety Reports or Equivalent Documents in the Control of Major Accident Hazards* for the OECD Working Group on Chemical Accidents. The aim of the project was to review the different approaches taken throughout OECD countries and to gather information to:

- Ascertain whether all member countries use safety documents;
- Compare the purposes of safety documents within the OECD;
- Explore how documents demonstrate that safety measures are in place;
- Look at how the documents advance safety;
- Share experience and knowledge of how businesses, national and local authorities and others use the information in safety documents; and
- Assist in the development of international best practice.

Information was collected via a questionnaire, which was devised by the UK and sent to all OECD members for completion. 22 countries returned completed questionnaires (15 of which implement the Seveso II Directive) and these were used by the UK to produce a draft report in time for the 16th meeting of the Chemical Accidents Working Group in October 2006. The report was presented to the meeting by the UK delegate and was generally well received.

The overall conclusion of the project was that the majority of OECD members operate very similar systems for the control of major accident hazards. Safety documents are widely used and their purposes are broadly similar. Documents are assessed in detail by regulators and inform subsequent intervention plans. They form the basis of operators' demonstrations that all necessary measures have been taken to prevent major accidents, or to limit the consequences for man and the environment of any accidents that do occur.

Although this project provided a useful overview of the systems in operation in different member countries, it proved difficult to draw detailed conclusions about the differences (or similarities) and a number of questions remained unanswered. To aid in the development of international best practice suggestions for one or more further projects were made and these will be discussed at the 17th meeting of the Chemical Accidents Working Group in 2007.

(13) Implications of the Globally Harmonised System of Classification and Labelling (GHS) for Seveso II and COMAH

The EU is working towards implementation of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and in Spring 2006 called an "ad hoc Technical Working Group (TWG) on Seveso II and GHS" to consider the options for linking GHS with the Seveso II Directive. This linkage would replace the current classification of substances and preparations according to the provisions of the EC Dangerous Substances Directive (Council Directive 67/548/EEC) and the Dangerous Preparations Directive (Council Directive 199/45/EC), which are implemented in the UK through the CHIP Regulations. It therefore has the potential to impact on the number of sites falling within scope of the COMAH Regulations.

Following the kick-off meeting of the TWG, the UK agreed to chair a sub-group of Competent Authorities to investigate the implications of linking GHS with Seveso II in terms of toxicity to people. In support of this, the HSE has commissioned HSL to undertake a research project to look at this issue in detail.

(14) UK participation in Risk Assessment Workshop in Varese, Italy, October 2006

A representative of the CA attended an OECD-EC Workshop on *Risk Assessment Practices for Hazardous Substances Involved in Accidental Releases*, sponsored by Environment Canada and the EC Major Accident Hazards Bureau (MAHB), which was held in Varese, Italy, in October 2006. The workshop was aimed at: (i) sharing information and experiences on approaches used by member countries to establish lists of hazardous substances and threshold quantities regulated under chemical accidents policies; (ii) determining interest among countries for closer co-operation on (re-)evaluation of hazardous substances in the context of accident hazards control; and (iii) initiating collaboration on development of a common approach to identify chemicals of interest for accident regulation purposes.

The CA participant gave a presentation on Seveso, Classification and GHS (see Item 13). A draft report contains a number of observations (including the need to manage the changes arising from GHS and challenges faced by land-use planners over the incompatibility of pre-existing sites with local neighbourhoods). Three key recommendations are to:

- collaborate on further development of methods to collect/analyse data related to acute toxicity
- develop a process for identifying advantages/disadvantages of and gaps in the process for selecting substances and thresholds to manage potential major hazards, and
- improve sharing of knowledge when assessing risks from chemicals.

INCIDENTS

(15) Incidents during 2005-2006

During the course of the 2-year period covered by this report there were six incidents that met the criteria for notification of a major accident to the EC under regulation 21 and schedule 7 of COMAH, three of which occurred in 2005 and three in 2006:

- (i) Oil leak at Petroplus, Milford Haven, in July 2005 (reportable due to pollution of ≥ 1 ha of the aquifer);
- (ii) Warehouse fire at Chemson Ltd, Wallsend, in November 2005 (reportable due to loss of $\geq 5\%$ of the qualifying quantity of dangerous substances);

- (iii) Fire and explosion at the Buncefield Oil Storage Depot, Hemel Hempstead, on 11 December 2005 (reportable due to pollution of ≥ 1 ha of groundwater).
- (iv) Loss of containment of cyclohexane at Invista Textiles, Cleveland, on 19th February 2006 (reportable due to accidental discharge of $>5\%$ of the qualifying quantity).
- (v) Explosion of a pyrotechnic composition containing nitroglycerine in the process of manufacture at Wallop Defence Systems Ltd, Hampshire, on 26th June 2006 (reportable because one person was killed in an accident directly involving a dangerous substance).
- (vi) Fire at Biolab UK Ltd, Cheltenham, on 4th/5th September 2006 (reportable due to almost total loss of chemical inventory, well in excess of the qualifying quantities).

A brief summary of each of these incidents follows:

(i) Oil Leak at Petroplus Tank Storage, Milford Haven, July 2005

Over a period of about 4 weeks in July 2005 some 653 tonnes of kerosene leaked from a small hole in the base of a tank at a storage facility at Waterston, Milford Haven, operated by Petroplus Tank Storage Milford Haven Ltd. Investigators concluded that a repair made to the base of the tank after a similar incident in 2001 was not carried out according to the required standard, with the result that corrosion had led to a small hole developing in the base of the tank. The resultant pollution led to the destruction of the habitat of the nearby Hazelbeach stream and the closure of the beach during August 2005.

Petroplus was subsequently prosecuted by the Environment Agency Wales at Haverfordwest Magistrates Court on 10 August 2006. The company pleaded guilty to three charges of failing to ensure that the repair to the tank was carried out to the required standard, failing to control their inventory of kerosene in accordance with their permit and the subsequent destruction of the habitat of the Hazelbeach stream. They were fined £29,900 and ordered to pay costs of £39,801. In addition, the company has estimated that the clean-up operation cost them around £3 million.

(ii) Warehouse Fire at Chemson Ltd, Wallsend, Tyne & Wear, November 2005

On 15/16 November 2005 there was a fire in a warehouse at the premises of Chemson Ltd, Wallsend, Tyne & Wear. The warehouse contained finished dry goods, including organo-lead compounds (classified as dangerous for the environment, R50/53), which were stored in bags on moveable racking. The cause of the fire is uncertain but it is believed that some combustible material found a source of ignition on unprotected electrical equipment.

During the fire fighting effort concerns were raised that fire water containment might be inadequate. As fire water run-off could have caused

organo-lead pollution of the nearby River Tyne, an initial decision was taken to let the fire burn. However, it was subsequently decided that some fire fighting would be possible without breaching fire water containment, aided by running on-site effluent treatment. By this stage it was too late to save the warehouse, and the entire building and its contents were destroyed.

Although there was some contamination of the site and nearby land with asbestos from the building structure, no ecological damage was found and there were no injuries to people. Had the warehouse contained fire detection, early notification of the incident might have limited the extent of the damage. This incident emphasises the importance of ensuring that there is adequate fire water containment for the worst case scenario.

(iii) Fire and Explosion at the Buncefield Oil Storage Depot, Hemel Hempstead, December 2005

In the early hours of Sunday 11th December 2005, a series of explosions occurred at the Buncefield Oil Storage Depot, Hemel Hempstead, Hertfordshire, at least one of which was of massive proportions. These were followed by a large fire, which engulfed a high proportion of the site. Over 40 people were injured; fortunately there were no fatalities. Significant damage occurred to both commercial and residential properties in the vicinity and a large area around the site was evacuated on emergency service advice. The fire burned for several days, destroying most of the site and emitting large clouds of black smoke into the atmosphere.

The CA is conducting a detailed, thorough and wide-ranging investigation, which was ongoing throughout 2006 and is expected to take many more months to complete. The investigation team is collecting forensic and other evidence and conducting interviews, and will revisit the provisions of the operator's safety report, with the aim of establishing the causes of the incident.

The investigation is being overseen by a Board, which will report to both the Health & Safety Commission (HSC) and the Environment Agency (EA). The Rt. Hon. Lord Newton of Braintree has been appointed as the independent chairman of the Board, which includes staff from the EA and HSE, as well as independent members with relevant expertise.

At the conclusion of the investigation, HSC will publish a special report, pursuant to section 14(5) of the Health and Safety at Work etc. Act 1974. Throughout the course of the investigation, any information requiring immediate action to further safety and/or environmental protection in relation to the storage and distribution of hydrocarbon fuels identified by the investigation team will be transmitted without delay to duty holders and other appropriate recipients. At the request of HSC, all such information will be made publicly available. Due to the scale and importance of this investigation, a separate Buncefield Major Investigation website has been

set up, and full details on the progress of the investigation can be obtained by accessing the homepage of that site -
<http://www.buncefieldinvestigation.gov.uk/index.htm>.

(iv) Loss of containment of cyclohexane at Invista Textiles, Cleveland, on 19th February 2006

On the morning of 19 February 2006 approximately 15 tonnes of cyclohexane was lost from a processing vessel. There was no ignition, no off-site effects and no long term environmental damage associated with the release but the accident was reportable to the EU due to accidental discharge of more than 5% of the qualifying quantity of a dangerous substance. The immediate causes of the accident have been identified as failure of an agitator in the vessel, which resulted in failure of a 16-inch nozzle flange, which allowed hot pressurised vapours to escape. Following the incident a Prohibition Notice was served under regulation 18 of COMAH. The plant was restarted on 18/19 March 2006, after the Notice had been complied with.

(v) Explosion of a pyrotechnic composition containing nitroglycerine in the process of manufacture at Wallop Defence Systems Ltd, Hampshire, on 26th June 2006

One employee was killed and 4 other persons suffered minor injuries when an industrial oven in a building used to produce infra red flares exploded. There was a fireball and a plume of smoke but the fire almost extinguished itself. Part of the building was completely demolished and debris was scattered over a wide area, causing damage to the windows of buildings close to the site. The factory was evacuated and nearby roads were closed. Wallop Defence Systems has no plans to resume the production process involved in the explosion.

(vi) Fire at Biolab UK Ltd, Cheltenham, on 4th/5th September 2006 (reportable due to almost total loss of chemical inventory, well in excess of the qualifying quantities).

A factory unit involved in the packing and storing of swimming pool and water treatment chemicals was totally destroyed by fire, with almost total loss of the chemical inventory (well in excess of 5% of the qualifying quantity of dangerous substances required to make the accident reportable to the EC). The fire started in a conveyor system being used to transfer 'dichlor' (sodium dichloroisocyanurate dihydrate) from a 1-tonne bulk bag to holding hoppers. The chemistry involved in initiation and sustainment of the fire is being investigated by the Health and Safety Laboratory (HSL). There was no significant human injury (some reports of minor respiratory irritation) but large numbers of fish were killed over a 6km stretch of the River Colne (estimate 4-7 years to return to pre-incident condition). An adjacent trunk road was closed for 24 hours due to the smoke plume blowing directly across it. Mitigation

measures to prevent water run-off seem to have been inadequate. The Company was unaware of the full layout of their drainage system and how their inventory could get into the watercourse. The burnt out factory unit has since been demolished and there are no plans to resume storage of hazardous chemicals on this site in the future, therefore the premises will cease to be subject to the requirements of the COMAH Regulations.