Chemicals northwest

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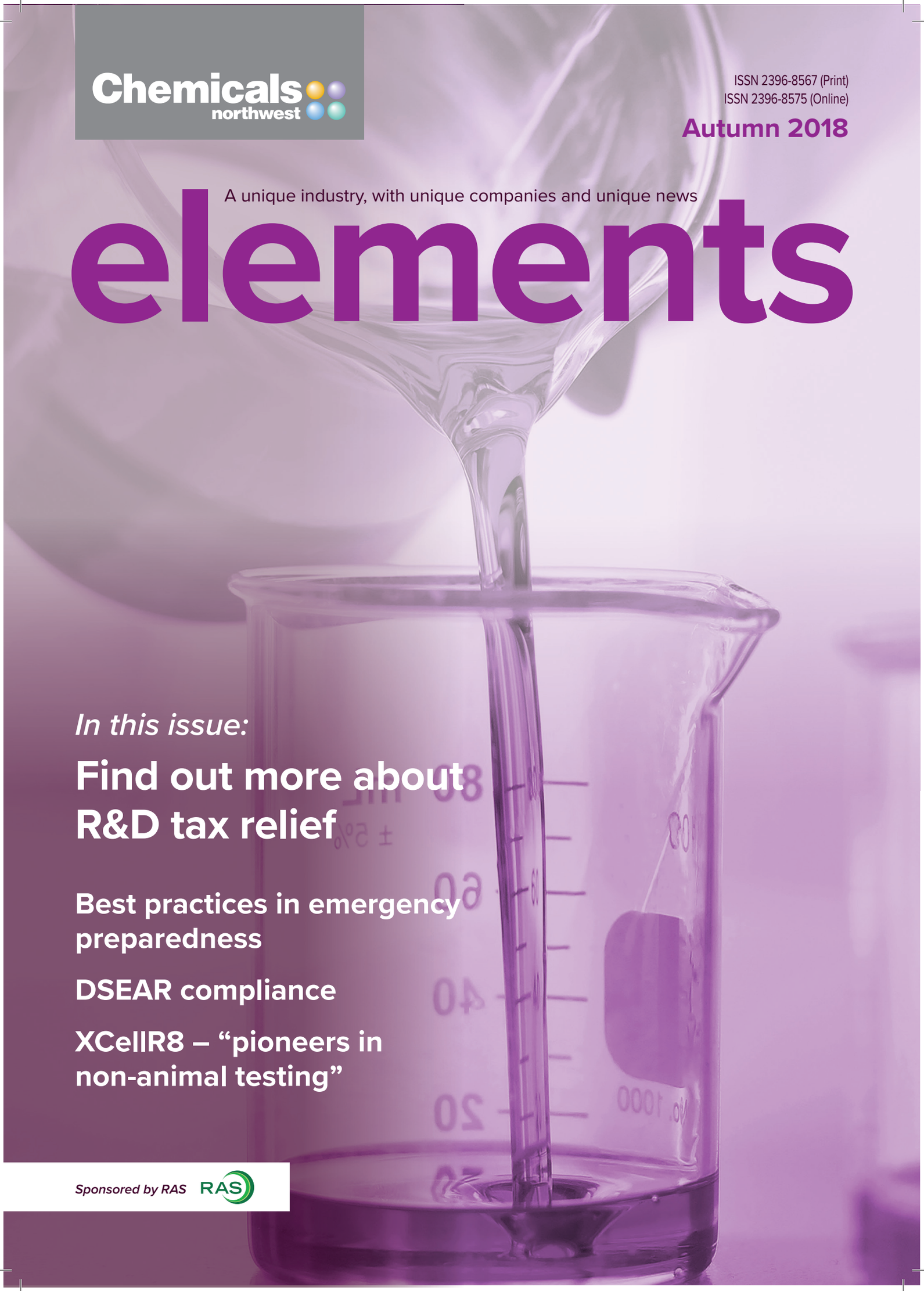
Autumn 2018

A unique industry, with unique companies and unique news

elements



In this issue:

Find out more about R&D tax relief

Best practices in emergency preparedness

DSEAR compliance

XCellR8 – "pioneers in non-animal testing"

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Contents Autumn 2018

Membership

Would your company benefit from joining an organisation that supports and promotes the chemistry-using sector in the Northwest? Do you want to understand more, and contribute to, the industry issues within the region?
If you are a manufacturer, chemical user or offer products and services to the sector, why not join us today? See over for details or please contact:
Alex Abraitis - Member services and events manager
alex.abraitis@chemicalsnorthwest.org.uk or visit:
www.chemicalsnorthwest.org.uk/membership/membership_benefits/

2018-2019 Rates

Micro corporate membership	(1 - 10 employees)	£423+VAT
Standard corporate membership	(11-100 employees)	£735+VAT
Large corporate membership	(100+ employees)	£936+VAT

Our membership year runs from 1 April to 31 March. A pro-rata basis usually applies to joining at other times in the year and we'd be happy to discuss on application.

Welcome

In this issue of Elements we take a closer look at some of the key issues facing chemical businesses in the region. There are some great articles from our member colleagues providing useful insights to: safety risks and culture, R&D tax relief, DSEAR compliance, patent protection and chemicals legislation. The great reads continue with XCelIR8 explaining how they have become an amazing Northwest success story.

Brexit is dominating most business discussions at this time, more so as the crucial EU council meeting in October reports back on the progress of the negotiations. The CNW Brexit discussion group plans to meet in November and much focus will be attached to the latest outcomes. Chemicals policy already has a high profile in the negotiations and the corresponding REACH group will be taken through the developments in terms of what future engagement will look like?

Finally CNW is preparing for a major conference covering best practices in process safety. “Keeping process industries safe: lessons learnt and best practices” examines the learnings from the Piper Alpha disaster in 1988 and hears cases studies from prominent chemical manufacturers in the region.

John Roche - ***Chemicals Northwest***

About us...

Chemicals Northwest is an established business network wholly owned by the Chemical Industries Association.

With over 160 members we actively promote this important regional sector and our objective is to help membership to grow through;.

- **facilitating** networking events, common interest groups and interactive workshops, all aimed at covering topical industry issues.
- **supporting** projects and programmes that identify and enhance business performance and generally support continuous improvement across the sector.
- **promoting** science and engineering based skills, helping to address the region’s future needs.
- **improving** the image of the industry overall, including generating a positive reputation, through communicating achievements and success.
- **contributing** to the industry’s strategic voice and the national growth agenda aligned to the work of the Chemical Industries Association.
- **connecting** the community of chemistry-using businesses and the vital supply chains here in the Northwest.

Chemicals Northwest really does bring people together! It is an essential feature of successful networking strategies used by many organisations. We coordinate a range of meetings and events to enable ‘face to face’ networking for the benefit of all members. Every successful business networking organisation also needs effective communications channels. As a result of gradual development over recent years, getting messages across, promoting member companies and reporting news, Chemical Northwest has reached new levels of topicality and quality. Here are the the main features and benefits of membership...

Annual Awards Dinner - During the annual CNW awards programme we are privileged to witness the many achievements made in our local sector. Culminating in a great night of celebration each year’s awards are a fantastic way your company can support the region’s chemicals sector and help raise your own profile. Up to 300 guests from across the industry gather on the night and everyone can see for themselves the amazing achievements made by our people and organisations.

“Focus 50” - This recently named series of seminars and networking events is becoming ever more popular.

Over the years CNW has focused on a range of highly topical and relevant business issues. Technical, regulatory and operational insights have been delivered by experts in their fields. These events ensure good practices are shared and all gain new knowledge. As businesses get to grips with the changing landscape there will always be new issues for members to analyse.

Breakfast Networking - Chemicals Northwest is gaining a growing reputation for high quality breakfast networking events. With no specific theme, delegates are encouraged to make new contacts and some will make short pitches about their company, its products and services plus news announcements! The breakfast meetings have proved to be very popular and currently run on a 2 monthly basis attracting an average of 40 people each time. New contacts can lead to new opportunities and new business. All are welcome.

Common Interest Groups - Chemicals Northwest's **REACH** group has followed closely the developments within this complex and long term piece of legislation. The initiative allows the sharing of experience, best practice and knowledge between manufacturing, supply chain and support service providers, all with a keen interest in REACH. The group meets three times a year and now has a membership of over 50 companies.

CNW started the **Brexit** user group straight after the referendum in 2016 and it is gaining more and more support from membership. Whilst there is still uncertainty, many businesses will be looking to the future impacts, so we are enabling all interested parties to meet and discuss in more detail their common issues and concerns. Up to date information, insights and reports form the basis of each agenda, which will run parallel to the national work carried out by CIA.

Elements magazine - CNW produces an informative quarterly magazine called Elements which contains the latest round up of member news, specialist features and 'spotlights' on new member companies. This is a great opportunity to establish an association between your organisation and important sector issues, by contributing free editorial and press releases. Companies who do business in the chemicals sector may also wish to look at advertising options. The CNW sector directory is now integrated into Elements.

Website - Visits to the CNW website have almost doubled in the past 12 months. The website is regularly updated with industry news and the events programme. Companies are increasingly using it for enquiries and advertising. There is an efficient "e-shot" function which allows direct messaging to our contacts list. Viewers of the directory pages can search the whole of our supply chain providers to find where to buy products and services.

LinkedIn - The Chemicals Northwest LinkedIn group was created in the latter half of 2010 and has an ever increasing membership, with over 1300 members now connected. The group provides the opportunity for chemical industry professionals to share ideas and knowledge.

Twitter - The CNW Twitter account is growing, so to hear about the latest news from CNW and the wider sector, why not follow us. In addition we'd be happy to re-tweet any news or updates that members themselves tweet.

A lot can happen in 6 weeks

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FOCUS 50

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Keeping process industries safe - past lessons and current best practice

1 November 2018 at Sci-Tech Daresbury WA4 4FS

Chemicals Northwest and Chemical Industries Association are preparing an update event on process safety management in the chemical industry. The programme will cover key process safety topics and learnings for businesses of all sizes, to help manage process safety risks and to prevent incidents. This year is the 30th anniversary of the Piper Alpha disaster and amongst other things the agenda will review the lessons learnt and how the incident has driven improved hazard and risk management in the process industries.

We are pleased to announce that the chair for the event will be Phil Scott, Director of Safety & Security at CIA. Also note that contributions are confirmed by the Health & Safety Executive and the winner of CIA's Process Safety Leadership Award, Stepan UK Ltd. Best practice experiences will be shared from two further CIA member companies and we will also hear about some of the latest skills and capabilities support available in helping firms improve their process safety performance.

The event will focus on practical implementations of current good practices in process safety management, taking a look at what is currently happening and what lies ahead."

Please find the provisional programme opposite. Bookings can be made at **www.chemcialsnorthwest/events**

	Coffee and registration from 8.45am
9.25	**Welcome and opening remarks** **Chair:** Phil Scott, Director of Safety & Security *Chemical Industries Association*
9.30	**Piper Alpha 30 years on – what lessons for the chemicals sector?** Andrea Longley, Responsible Care Executive, *Chemical Industries Association*
9.55	**Winning the CIA process safety leadership award** Peter Wright, *Stepan UK*
10.20	**Process safety skills - where next?** Richard Roff, Chair, Process Safety Management *Competence Programme Board/Costain*
10.45	**Process safety testing** *Kindlow Safety Services (15 mins)* **Bow Tie analysis** *RPS Group (15 mins)*
11.15	Coffee
11.30	**Explosion modelling** *BPE Design & Support (15 mins)* **Workforce development challenges in a 24/7 industry,** *HFL Consulting (15 mins)* **Leadership and collaboration** *RAS Ltd (15 mins)*
12.15	**"Ensuring robustness of barriers to major accidents"** David Royle, *LyondellBasell*
12.40	Lunch
13.30	**Priorities for regulating the chemicals sector** *Health & Safety Executive*
14.00	**Creeping change hazard identification** Mark Burke, *Robinson Brothers Ltd*
14.25	**What are the next key issues for the process industries?** Phil Scott, *Chemical Industries Association* *... including a summary of issues, themes and lessons from the day*
14.35	Wrap-up and networking

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DSEAR Compliance: beyond hazardous area classification

The Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) are in place to ensure that establishments with substances which could cause an ignited incident have identified and appropriately managed their risks, but when we think about DSEAR, what's the first thing that springs to mind? For most, it's probably hazardous area classification and zoning maps, which are a key and tangible deliverable to demonstrate compliance.

The Regulations, however, go much further than this and the less tangible organisational aspects are often eclipsed by the technical requirements. The result of this is not only a weaker demonstration, but a misunderstanding of the risk and how to control it, leading to inefficient resource management. In this article, we explore how organisations can ensure they are taking a comprehensive, but pragmatic, approach to DSEAR by integrating the key principles into the wider management system.

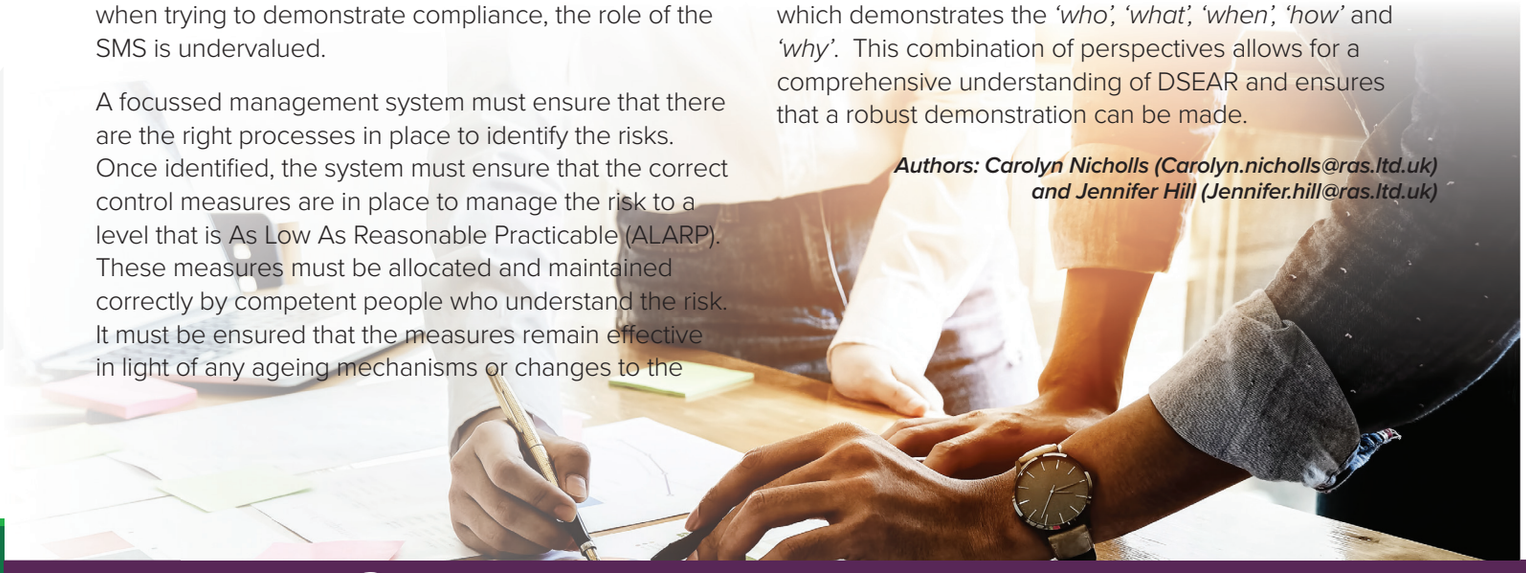
DSEAR is not all about risk assessment and identifying potential flammable atmospheres. There is a requirement to demonstrate that at an establishment, the risks are fully understood and managed through the identification and application of appropriate control measures (both technical and organisational), emergency planning and effective communication and training. The foundation of all of these requirements is a comprehensive set of principles and processes which together form a safety management system, but often when trying to demonstrate compliance, the role of the SMS is undervalued.

A focussed management system must ensure that there are the right processes in place to identify the risks. Once identified, the system must ensure that the correct control measures are in place to manage the risk to a level that is As Low As Reasonable Practicable (ALARP). These measures must be allocated and maintained correctly by competent people who understand the risk. It must be ensured that the measures remain effective in light of any ageing mechanisms or changes to the plant and process which might occur in their lifetime. This is achieved by ensuring that the risk assessment is continuously reviewed and remains current; and so the cycle continues. Each aspect summarised here is linked back to the processes involved in a safety management system, and so it is important to ensure that any demonstration of compliance with DSEAR creates the right balance between the technical and organisational aspects, giving due consideration to the SMS.

In the rest of Europe where the ATEX directive is in force, there is a requirement to write an Explosion Protection Document (EPD) which details all of the arrangements on site for compliance. In Great Britain under DSEAR, however, there is no requirement for such a document to duplicate information in existing written systems which already describe the aspects of compliance.

It could be tempting for sites already under other regulations for managing dangerous substances, such as COMAH, to assume that a sufficient demonstration of DSEAR compliance is already made in their Safety Report, eliminating the need for any additional documentation. However, it is important to consider that DSEAR requires that all dangerous substances are taken into account, unlike COMAH which is applicable to certain substances in specified quantities, and so the documentation at COMAH sites is not always sufficient. It can therefore be deemed beneficial to have in place some sort of DSEAR compliance document to make the demonstration that a site fully understands and manages all of its risks. This document can act as a platform to demonstrate that risk management within an organisation goes well beyond the *'where'* in the hazardous area schedule; it also has in place a well thought out safety management system which demonstrates the *'who', 'what', 'when', 'how'* and *'why'*. This combination of perspectives allows for a comprehensive understanding of DSEAR and ensures that a robust demonstration can be made.

Authors: Carolyn Nicholls (Carolyn.nicholls@ras.ltd.uk) and Jennifer Hill (Jennifer.hill@ras.ltd.uk)



Safety and production

Health and safety is often viewed as something that is additional to the day to day demands of production and even an inhibitor to the productivity of a business. In this article Ian Peach of OAMPS Hazardous Industries suggests that the opposite is true.

Companies that manufacture their products efficiently and to high quality standards also typically have low accident rates. The building blocks necessary to manage production, quality and safety are essentially the same and these include documented safe systems of work, effective training systems and good supervision. There are, of course, many more aspects to good performance than this but taken together they deliver efficient and safe work practices. Another way of looking at this is that companies that have high injury rates tend also to be inefficient and routinely disappoint customers.

Accidents also cost money, directly at the time in covering absences but also indirectly through the link between money paid out for civil claims and insurance premiums. There are also criminal liabilities for companies and individuals who are deemed to have acted negligently not to mention the moral obligation to employees. Why then do some companies get it wrong?

The safety culture of an organisation is a reflection of the attitudes and behaviours of the senior management. Individuals employed within an organisation are strongly influenced by these attitudes and behaviours even though the influences and effects are sometimes subtle. As an employee, if whenever I interact with my manager production is the only topic for discussion then I'm being tacitly told where safety sits versus production even though this probably isn't the intended message.

Effective supervision is critical but this is significantly more difficult to achieve than it sounds. The supervisor or first line manager is one of the most challenging roles in any organisation. It is where the rubber hits the road for safety. The supervisor is the person in day to day charge checking and enforcing standards and the most effective supervisors are not always popular in these challenging aspects of their job. The quality of supervision will rapidly degrade if supervisors are not supported by their managers when problems are raised - conversely, managers must check standards for themselves as part of an audit / monitoring programme. If a manager finds a problem, the most important action is to change the behaviour of the supervisor so that they are capable of identifying and addressing the problem themselves.

A safety culture will degrade in the same way as any risk control measures unless it is driven from the top of the organisation. Senior managers have a bias towards receiving good news - information that fits with their view of the world and will look good at the next board meeting. This is unhelpful for an organisation because everyone underneath the manager soon gets the message and problems cease to be raised. The senior manager is unlikely to understand the implications of their attitude but who will point out the error of their ways?

Assessing a safety culture is difficult but there are common features that are shared by top performing organisations including:

- senior management who understand the hazards of their business and can articulate the safe systems of work that minimise the risk of incidents.

- genuine leadership of safety by line management. Health and Safety managers must be seen as advisors to assist management, not as the function to whom responsibility for performance is delegated. Management who spend time on the shop floor and are actively involved in the supervision and enforcement of standards are more likely to create a safe AND productive working environment.

To avoid the disruption, costs and reputational damage which could be caused to your business by incidents your best defence is always to avoid accidents in the first place. The same approach improves quality, productivity and customer satisfaction and reduces your overall cost of risk by being reflected in your insurance premiums.

Author: Ian Peach
For more information please contact
OAMPS Hazardous Industries on 01372 869700.

Pioneers in non-animal testing

Business for chemical testing laboratory XCellR8 is going from strength to strength. A significant expansion took place earlier this year when the business moved from The Innovation Centre to the newly completed Techspace One building also on the Sci-Tech Daresbury campus.

Office space has doubled and importantly, laboratory capacity has trebled. Furthermore, the company has grown from the two co-founders to 17 employees and was recently appointed as testing partner to the Body Shop. New tests for lung irritation (inhalation toxicity) and phototoxicity have also been launched this year.

Left ro Right: Dr. Carol Treasure, Bushra Sim

So what's behind this great northwest success story? Founded in 2008 by two university post-graduates, managing director Dr Carol Treasure and technical director Bushra Sim wanted to convert their huge amount of knowledge and experience gained in in vitro human skin modelling to develop a business that replaces animal testing. Carol says, "cell culture and toxicity testing is in our roots!".

Only company worldwide to eliminate animal components

The company's mission is to accelerate the world's transition to 100% animal-free testing and as such, offers regulatory in vitro tests for an extensive range of hazards including skin sensitisation, corrosion and irritation plus eye irritation. In addition, toxicity tests can be performed for genotoxicity, cytotoxicity and phototoxicity, all to Good Laboratory Practice (GLP) standards. Carol goes on to affirm, "at XCellR8, we've never used animals or animal-derived products in any of our tests now that human cell cultures are commercially available. Companies who use our regulatory tests can satisfy global legislative safety requirements and animal testing bans at the same time. That feels like a win-win all round".

Ahead of their time

When XCellR8 first launched, Carol admits they were ahead of their time and their first clients were early adopters for whom cruelty-free testing was fundamental. Their big break came when they won the Lush Prize for training services provision. The company was later contracted to work on the long-term testing programme for Lush's entire product range, recently completing its 1000th test for the global retailer.

Next, the regulatory environment swung in their favour, with the introduction of the EU Cosmetic Directive in 2013 which banned the testing of cosmetic ingredients and products on animals. This was followed by their animal-free adaptions of tests for skin sensitisation, irritation and corrosion gaining regulatory recognition from OECD. Suddenly in vitro tests were mandated, and moved from the alternative to the default.

REACH regulation has also played a part in XCellR8's business growth as many firms use their services to provide necessary data for product dossiers and safety data sheets. Carol adds, "these days more and more chemical companies are asking for help with REACH testing, especially in dealing with backlogs resulting from the 2018 deadline".

So where next for this fast paced innovator? The Asia region is predicted to be the fastest growing market for in vitro toxicology testing over the next five years. Carol visited Shanghai recently to speak at a conference and saw for herself the appetite for scientific expertise in China. She also predicts that other sectors such as chemicals and pharmaceuticals will follow the cosmetics industry and introduce bans, at least for topical skincare products and ingredients, as the new science proves itself to be more robust and predictive than old animal tests.

Improved methods of assessing acute toxicity

XCellR8 also collaborates with companies to develop their best strategies for dealing with the issues surrounding animal testing. "We are always working on new ways to test ingredients for safety and ask the industry what animal free tests they would like to see next. For instance, with funding from Innovate UK and Horizon 20/20, we are currently researching improved methods for assessing acute toxicity and are developing a more predictive model for skin irritation."

"We took the first steps by developing a non-regulatory screen for human acute toxicity, using human cells in animal product-free culture. The screen was internally validated for chemical ingredients and is already used by our clients a part of a weight-of-evidence approach in REACH submissions, to avoid the widely discredited LD50-related animal tests."

"Now we are planning to further develop the test and expand its applicability across a range of chemical sectors, as well as seeking regulatory approval for the screen to eventually be used as part of a non-animal testing strategy for human acute toxicity."
Carol concludes, "our journey to achieving our vision is challenging, but with our outstanding team and increased capacity, we're a significant milestone nearer".

Will your new product be more patentable than you think?

It is well known that an inventor can obtain a patent to protect a new chemical species, such as a new pharmaceutically active compound or a new polymer. It is probably reasonably well known that an inventor can also obtain patent protection for a new chemical composition, for example a new paint formulation or a fuel additive mixture. However, it is probably less well known that the possibilities for patenting improvements in chemical products stretch much further than this, especially in Europe. These possibilities are explored below to demonstrate how patent protection can be maximised in the chemical field.

Selection inventions

Patent documents related to chemicals often make general disclosures of a broad range of structurally related compounds – for example using generic "Markush" structures – whilst providing a much more limited set of actual example compounds which have been prepared and tested. If it is later found that a particular compound within the scope of the generic structure but different to the examples in the prior patent has particularly advantageous or different properties, then this compound may be patentable. This is one example of a "selection invention".

Another example is where a prior published document discloses a composition comprising components A and B, and gives a long list of possible compounds for each of A and B. A particular selection of one component A and one component B may be patentable if this combination has a surprisingly good effect compared to the examples given in the prior document.

A further example of a potential selection invention is where a prior published document discloses a broad range of amounts of a component in a composition and it is later found that a specific, relatively narrow range of that component has a surprising beneficial effect compared to the example compositions described in the prior publication. For example, if the prior publication states that a biocidal composition may comprise 10-90 wt% of ammonium salt A and it is later discovered that a biocidal composition comprising 25-30 wt% of A is particularly effective, then this may be a patentable invention. This principle theoretically applies to any numerical range which could be used to define a product or a process, such as temperatures, viscosities etc.

New uses of known compounds and compositions

Another way of obtaining patent protection for seemingly known compounds or compositions is by taking advantage of "use" claims. This type of patent claim is drawn to a use of a substance for achieving a specific purpose or effect, for example: *"substance X for use as an insecticide"*. Such a claim is considered new, even though the compound or composition is not new, as long as it is based on a new technical effect. In this example, if substance X is a known surfactant, its use as an insecticide may be considered patentable.

This principle can even apply where the new technical effect was inherently achieved by a different known use. The classic example of this is the case where an earlier document described *"substance X for use as a rust inhibitor"* and the later filed patent application claimed the *"use of substance X as a friction reducing additive in a lubricant composition"*. This type of claim was considered allowable over the earlier document despite the fact that friction reduction may have been inherently taking place in the known use as a rust inhibitor.

Kits of known compositions

A combination of two or more known compositions may also be patentable. For example, a composition C and a composition D may be already known and used separately as biocides. If it is later found that that using C and D together surprisingly produces a much improved biocidal effect, this could be patentable as a "kit" of separately packaged compositions C and D.

In summary, there are many ways of claiming chemical inventions, even when the compounds and compositions are seemingly already well known. Therefore our advice would be to always consult your patent attorney when you have developed any kind of improved compound, composition or combination, as it may well be protectable.

Author: James Myatt, Appleyard Lees LLP

Search start-up business has new home

Chemicals industry specialists Hybrid Search have taken a major step forward in the company's development by moving into a new office in Chester city centre. Located close to Chester's historic racecourse, the search and consultancy practice will be calling Linenhall House home for at least the next three years. "It allows us to put down roots and completely immerse ourselves within the community," said Daniel Kaczmarski, co-founder of Hybrid Search. "It also creates a stable place of work for employees and an attractive location for people to join."

The business will look to take advantage of the additional space that wasn't available to them before. "The conference room gives us the opportunity to bring in clients while the staff room gives employees the freedom of using different areas to work or relax throughout the day," said David Wilson, co-founder of Hybrid Search.

The move happened one year after the company traded in their kitchen table setup for their first dedicated office. However, due to accelerated company growth, the need to find a larger space came faster than anticipated. "Our plan was to stay as a twosome for the first year but a busy first quarter led to us making our first hire after six months," David said. "The old office was fine for three people but as we saw another opportunity for growth by bringing in a fourth member of the team, it was evident that we had outgrown the space within six months."

Founded in April 2017, Hybrid Search focuses on delivering strategic hires and supporting chemicals companies throughout the Northwest and on a global level. They have helped clients that range from smaller SMEs to multibillion turnover businesses. Along with their retained search service, Hybrid Search also offers a range of consultancy options to help companies make key decisions and plan their future hiring strategy.

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EPA just improved the new chemical review process under TSCA

Since the Toxic Substances Control Act (TSCA) was amended in 2016, "new" chemical approval has slowed considerably. Key among the reasons for this has been the U.S. Environmental Protection Agency's (EPA) interpretation of new TSCA Section 5, and in particular Section 5(a)(3)(C), the provision addressing what it takes to make a "not likely" to present an unreasonable risk determination -- the finding all new chemical innovators seek.

A recent decision on a new polymer bearing the code P-16-0510 represents a positive step in clarifying EPA's thinking in this regard and in facilitating the commercialization of new chemical products.

New Section 5 Process

Under new TSCA, EPA must consider the "conditions of use" in making one of three determinations under Section 5: the new chemical "presents" an unreasonable risk of injury to health or the environment; the information available is insufficient for an evaluation of the effects of the new chemical and it may present an unreasonable risk of injury, or the new chemical is or will be produced in substantial quantities, and may enter the environment in substantial quantities, or there is or may be significant human exposure to the new chemical; or the new chemical is not likely to present an unreasonable risk of injury to health or the environment. The last determination has been an elusive one, and approximately 90% of all new chemicals to be manufactured in the U.S., which includes imported chemicals, are subject to manufacturing and/or use restrictions.

Early on, EPA embraced a restrictive interpretation of "reasonably foreseen" to include any imaginable condition as opposed to what Congress intended, namely a plausible (i.e., "reasonably foreseen") extension of or addition to the conditions of use as described in the notification. EPA decisions often conflated hazard (toxicity) and risk (a function of both hazard and exposure) with the result that any new chemical with an identified potential hazard was regulated as if it presented an unreasonable risk. EPA also used modeled results from Structure Activity Relationship (SAR) analysis and chemical analogs to assess hazards and EPA-preferred exposure "assumptions" that yielded unreasonably conservative exposure and risk assessments often resulting in the application of manufacturing and/or use restrictions.

P-16-0501

EPA's analysis of P-16-0501 specified the conditions of use that are intended, known, and reasonably foreseen. EPA confirmed that there were no known or reasonably foreseen conditions of use other than those intended by the submitter. EPA identified the new chemical's potential health hazard endpoints based on acrylamide and low molecular acrylamide analogs and included mutagenicity, developmental toxicity, reproductive effects, neurotoxicity, and a "marginal potential" for oncogenicity. Despite these endpoints, the relevant question EPA's review determined was how toxic is the new chemical and whether exposures were expected to exceed a "safe" level.

EPA considered the low-molecular weight components of the polymer (the "worst case") in its assessment and identified two chemical analogs. EPA also considered acrylamide's toxicity, although acrylamide is not a good analog because it has a lower molecular weight than the new chemical. EPA also identified ecotoxicity concerns. EPA modeled predicted toxicity levels for both acute and chronic effects to aquatic species and sets concentrations of concern at 425 ppb and 43 ppb for acute and chronic exposures, respectively. These levels put the substance in the "moderate" category for environmental hazard. EPA applied exposure modeling to predict exposures to any "potentially exposed or susceptible subpopulation," including workers, or to the general population, and consumers. EPA found that predicted exposures were below its concern level to not present an unreasonable risk. EPA also evaluated surface water concentrations and found that the estimated maximum concentrations did not exceed levels of concern identified by EPA.

Summary

In the case of P-16-0510, EPA limited its consideration to those conditions of use that were properly identified as reasonably likely to occur and evaluated unreasonable risks, not hazard. EPA's review of the new polymer is a welcomed departure from previous TSCA Section 5 decisions. EPA is urged to clarify further its thinking regarding what is and is not "reasonably foreseeable" for TSCA Section 5 purposes and identify what new chemical innovators can do to ensure EPA understands both what is intended, and what might be reasonably foreseen to occur. Such an approach is better aligned with TSCA's intent, does not unduly impede innovation, and ensures a continuous flow of new chemicals in the marketplace.

Author: Lynn L. Bergeson
President, ACTA Group

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Cash incentives for R&D in the chemical industry

The chemicals industry has an expansive coverage to include industries such as petrochemicals, fine chemical and specialty chemicals to name but a few.

The industry is an investor in Research and Development (R&D) and drives forward innovation to improve costs, increase productivity and reduce energy footprint and waste. R&D is an important investment for long term success and sustainability and therefore its undertaking remains important to businesses.

The UK Government recognises the need to invest in R&D and there are many incentives available to (i) enable UK companies to be rewarded for undertaking R&D and (ii) to demonstrate on the global stage that the UK is an attractive geographical location for businesses to undertake R&D.

The available tax reliefs

Such incentives include R&D tax relief and the Patent Box. Both are approved HM Revenue & Customs reliefs which result in a permanent cash benefit based on the R&D activity undertaken and the subsequent profits derived from any patents granted. In the UK there are two types of R&D tax relief depending on the size of the company.

- The Small Medium Enterprise (SME) relief can reduce a company's corporation tax liability by up to 26% for every qualifying R&D £1 incurred, or offer a cash credit of up to 33.35% for tax losses.
- Larger businesses, or those who have received other funding towards the same R&D project, can claim the R&D expenditure credit ('RDEC'). This can provide a taxable 12% income credit based on the related R&D spend incurred – which equates to a net cash benefit worth up to 9.7%.

If an R&D project leads to a UK, European or a specified EEA state patent being granted, the company may be able to benefit from the Patent Box. This can reduce the effective rate of corporation tax on profits derived from the IP to 10% - instead of the current prevailing rate of 19%.

What activities can qualify for relief?

The key component of the R&D scheme is identifying which activities satisfy the definition of R&D for tax purposes. The definition states that projects must seek to advance science or technology through the resolution of scientific or technological uncertainty.

- When applying this to real life scenarios, the advance can include the development of new or appreciably improved products or processes. The test is compared against the current market knowledge in that field of science or technology.
- Uncertainty tends to exist when it is not clear from the outset how the company will achieve the sought after advance. A good indication of this would be having to undertake trials and testing, or where a project is taking longer than first anticipated due to technological challenges. Activities which are not readily deducible by a competent professional in that field are likely to qualify.

This definition can often be off putting and the general consensus companies often elude to is that they are not advancing science or technology and the projects they are undertaking are part of their day jobs. Having a good understanding of the relevant R&D tax guidance will help the company assess which of its activities do meet the definition and whether a successful claim can be made.

Case Study:

The company operates a 24/7 production facility. The business is continually seeking to improve process efficiencies and the quality of output, as well as reducing energy and water consumption. The advancements sought will represent an advance in the overall capability in this field. Many trials would be run through the live process with varying degrees of technical uncertainty as to the impact each variation may have on the overall system and output. Due to the high degree of subjectivity to this, failing to understand the process can be the difference in a low value and a maximised R&D claim.

A thorough understanding the inputs and outputs of the production process and various R&D trials undertaken, can enable a reasonable apportionment of costs to be attributed to the R&D effort undertaken. A successful claim was made in respect of the key engineers, production staff, and other indirect resource plus materials, water and energy costs, providing a significant amount of cash for the company to reinvest into further innovation.

At Grant Thornton, we have a multi-disciplinary team of tax and technical expertise, with chemistry qualifications and industry expertise. Many of our clients belong to or are connected to the chemicals industry. Our experience and in-depth knowledge of the R&D tax legislation means we can help businesses optimise their claim potential whilst developing a robust approach that can be used repeatedly for future claims.

Author: Daniel O'Toole, R&D tax specialist, Grant Thornton LLP
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2M responds to fire crews' request for help ...

When Manchester's fire crews battled fierce fires across the region, including Stalybridge, for over three weeks, 2M Holdings responded to their appeal.

The fire had spread rapidly in the continuing UK heatwave. When the fire service placed an urgent appeal to the public for insect repellent and hats to protect the crews, 2M Holdings quickly got in touch with customers and suppliers to see who could help.

We are grateful to our customer Biteback Products, who kindly supplied Surfachem, a 2M Holdings company, with over 100 bottles of 'Flies Undone™' DEET Free insect repellent to protect the Fire crews. Surfachem have worked with Biteback products to provide a portfolio of ingredients to aid this growing business. To keep the crews cool, 2M Holdings also quickly sourced and delivered 100 hats for the crews.

Mottie Kessler MBE, Chairman and CEO of 2M Holdings said: "We are proud to partner with Biteback to support the Manchester fire crews. Our deepest gratitude goes to the crews for their tireless efforts. We wish them a safe and speedy conquering of the fire."

... and helps young people solve the plastic problem through chemistry!

The 2M STEM programme reaches circa 500 school children and young people in the North of the UK every year. The programme aims to increase their access to a career in the Chemical Industry and to inspire them to a career in STEM.

In July, Jim Bell, Dispersions Development Manager and Specialty Chemicals Account Manager at Banner Chemicals, a 2M subsidiary, once again became a Chemistry teacher for the day, as part of the 'Chemistry at Work' initiative at the Catalyst Museum.

Jim worked with 90 students and their teachers, explaining the invention of plastics mainly Polyethylene Terephthalate (PET) & Polypropylene (PP) and made some small pieces of each plastic in the lab. They discussed the uses of each and their properties for mobile phones, cups, bags, toys, clothes and others.

The students were made aware that the environmental issue of plastics is not a function of the chemical industry but merely a littering problem, where plastics are thrown away and not recycled.

They discussed statistics on the number of years for various plastics to biodegrade, and the quantity of recycling we do in the UK.

Jim and the students explored alternatives to traditional plastics and, including making a bioplastic from a potato!

After a hands on lab experiment to extract starch (amylose and amylopectin) from a potato, each student was presented with a 100% plant made water bottle courtesy of Banner Chemicals.

Mottie Kessler MBE, CEO and Chairman of 2M Holdings said: 'We are delighted to support Chemistry at Work Week. Inspiring the next generation of scientists is key to the health of our industry and something I passionately believe in.'

For schools looking for STEM education support or for more education, please contact Liran Maller, HR Director on lmaller@2m-holdings.com

Solutions for Global Chemical Compliance

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worldwide registration

Handling chemical products in a way that minimizes the risk to man and the environment is not an isolated local task. Companies selling their products internationally, will often face specific regulations for the safe use of chemicals in their target markets. Considerations need to take into account global initiatives and frame works like GHS, SAICM or TDG but also numerous country specific approaches for the risk management of chemical products. Knoell with its global network of affiliates and partners keeps track of the developments concerning global chemicals management and supports its clients with the most suitable strategy for their products and target markets.

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- Complete registration services for EU, Switzerland, Turkey, China, Taiwan, Korea, Japan, ASEAN countries, USA, Canada, Australia and others incl. local representation
- Complete Global Safety Data Sheet management

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Chemical substances, mixtures and articles: Information may be lost downstream the supply chain

Manufacturers of chemical products obtain their raw materials from many different sources. Single raw materials are sourced from multiple suppliers at different times and different prices. Several raw materials may be obtained from a single supplier. Further, raw materials are not necessarily chemical substances, they may also be already mixtures that are used in the preparation of final products.

REACH articles 31 to 33 define the communication within the supply chain from the chemical substance down to final articles. The main communication tool is the safety data sheet (SDS) and in cases where an SDS is not required, the necessary information shall be provided using different documentation.

Today, most chemical mixtures are shipped with an SDS, independent from whether it is required or not, since this is easiest and most standardized way to communicate relevant information.

Hence, members of a supply chain that are entirely based in Europe can rely on the communication of relevant data. This is not only information on the hazards of the product but also about registration status of the substances, authorization requirements or restricted uses etc.

The picture is different in those cases where the supply chain leaves the European Economic Area (EEA). Here, the obligations defined in the REACH regulation are not relevant. Hence, the SDS only communicates the hazardous properties, but the full composition of a product is not known, since only substances relevant for the classification according to GHS are listed in the SDS. Therefore, much information may be lost within the supply chain, as shown in Figure 1. In this example for a total of 20 substances information is missing (e.g. registration status under REACH or cut-off criteria for classification).

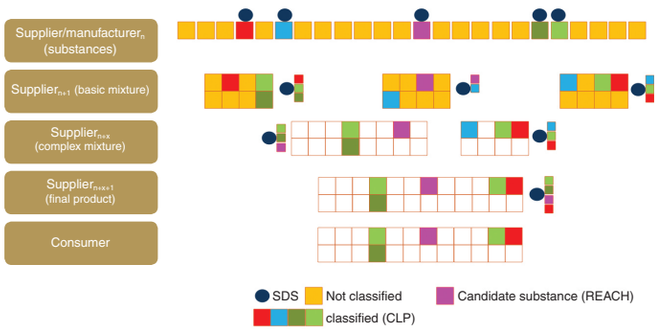


Figure 1: The loss of information within the supply chain (the not filled squares indicate substances that are not further communicated via SDS, since they do not contribute to the classification of the product).

These problems become even worse as soon as articles are considered. For articles the communication tools are not determined. Currently, under REACH, statements about REACH compliance are used. These are ordinary text files that more or less do provide sufficient information. According to article 33, information about a candidate substance present in an article in a concentration above 0.1% has to be communicated down the supply chain.

If we take Figure 1 again as an example and consider the final product as a raw material used in the production of articles instead of a consumer product, you can recognize that there is a candidate substance above 0.1% present. This information is passed in the supply chain to the producer of the article. And again, as long as we are only looking at supply chains within the EEA, we can expect that communication is sufficient. However, as soon as the article is not produced within the EEA, there is a high probability that the presence of the candidate substance is not communicated. Article manufacturers producing outside the EEA obtain SDS for their raw materials according to national requirements. Since the REACH regulation is only of interest within the EEA, candidate substances may not be communicated and the information is lost in the further course of the supply chain.

There is no simple solution for these problems but there are some measures companies may take.

For chemical mixtures, a company needs to get information about the full composition. In cases where a supplier does not want to disclose this information, the company may consider establishing a trustee between itself and the supplier. The supplier discloses the information to the trustee and the trustee takes over the responsibility for regulatory compliance of the products.

The communication of candidate substances in articles can be tackled differently. Candidate substances are most commonly also hazardous substances (e.g. CMR 1A) and as such they are communicated as a hazardous ingredient on the SDS no matter for which country it was issued. Hence the information about the presence of such a substance is available. Downstream user companies in the supply chain may therefore always ask for any available SDS the supplier got for its raw materials.

The key to obtain all relevant information in this way is of course raising awareness upstream in the supply chain and try to ask that all SDS that originally circulated in the supply chain are passed downstream. SDS are not business confidential and they can be freely distributed throughout the world. If every participant in the supply chain provides the obtained SDS down the supply chain, article producers at least get some hints about the potential presence of candidate substances or even restrictions that may apply. And this is one essential step closer to regulatory compliance.

Author: Dr. Thomas Berbner

“2018: The Year of Engineering.....we need to tackle misconceptions”, says Daresbury engineer

As a major government campaign aims to get more young people – particularly girls – into engineering, a local engineer says that changing perceptions at school age could be key to tipping the balance.

Fiona Smith is a chartered chemical engineer with process engineering firm BPE, based in Daresbury. She has more than 13 years’ experience in the industry and says that misconceptions that engineering is all about spanners and dirty overalls could be putting youngsters off. She said: “I’d never heard of chemical engineering before my chemistry teacher mentioned it to me as a career path when I was 16. I looked into it and realised I’d be really suited to the problem-solving aspects of it and the diversity of where it could take me really appealed.

“I think more information about the different engineering disciplines needs to be got across to girls at an earlier age to try and shift perception away from engineering just being very manual and at times dirty, obviously there can be an element of that but there’s also so much more.” Fiona says that she’s experienced first-hand just how varied a role in engineering can be. She says: “In my career I have spent time on chemical sites in overalls with a spanner in my hand but I’ve also sat in meetings with patent attorneys discussing intellectual property law and travelled by private jet to view possible site locations, I’ve known engineers who’ve gone to Westminster to lobby MPs on legislation, there’s so much more to the profession than people realise.”

2018 marks the Year of Engineering. It’s a government campaign, which celebrates the world and wonder of engineering and aims to encourage more young people – especially girls - into the profession. Official figures show that while women comprise 47 per cent of the overall UK workforce, they make up only 12 per cent of those working in engineering.

Fiona says that she’s confident the tide is starting to change though, having noticed more females around her in recent years. “I’ve worked in departments where there was an equal split between male and female and also departments where I was the only girl but I’d say that situation is getting less common now, thankfully,” she says. “On the technical side of our company, BPE, we’re a third female which I think is great.”

Pictured – Fiona Smith, a chartered chemical engineer for BPE

Best practice and learning lessons in emergency preparedness

Most people will be aware that emergency response procedures within the high hazards industries must be compliant with appropriate regulations and the regulators themselves have high expectations that plans are robust and effective.

It is further believed however that different operations can enhance their plans with novel approaches learnt from others' experiences.

Falck Fire Services has many years of experience providing emergency response services to many such operations around the world. On 26 June 2018 and in association with CNW, this new member company staged an interactive workshop at Sci-Tech Daresbury. Gary Cooling explained how the learning from the many years of this support has resulted in a global 'knowledge hub' including a series of good practice guides.

So what is 'good practice'? It is described as 'practice' that has been proven to work well and produce good results, and is therefore recommended as a model. It is a successful experience, which has been tested and validated, in the broad sense, which has been repeated and deserves to be shared so that a greater number of people can adopt it. Good Practice can be seen as the forerunner to 'best practice': "a working method or set of working methods that is officially accepted as being the best to use in a particular business or industry, usually described formally and in detail".

The workshop started by asking: "What is good practice in emergency preparedness systems for you?" It then went on to examine the key features and the checks to adopt in validating it as best practice. Ultimate aims will be to protect life, buildings and the environment, through clear plans, procedures and systems.

David Dowling explained that experience generates learned lessons which need to be embedded into an organisation to deliver an improvement. Lessons are achieved through refining working methods, culture and competence through deliberate or accidental exposure to simulated or live events. He went on to take a closer look at 'experiences' and 'lessons' across several features of emergency response including: Joint Emergency Services Interoperability Principles (JESIP), dynamic risk assessment (DRA), emergency response plan (ERP), rescue plans and incident response (IR) capability. Falck has produced guides for all of these, aimed at helping apply lessons learnt so that measurable improvements are delivered. Other useful tips include:

- justify the proposed structure in relation to the safety, referring to basic principles.
- use the same language of the emergency services
- link your rescue plans to the 'permit to work' system and the 'hierarchy of controls'
- ensure outsourced teams are approved by regulator
- identify what people do you need and what they do? ... you may not need all that have been specified?

Furthermore is your emergency response plan appropriate and proven and does it meet the needs of the emergency services? Pre-plans tend now to be in more summary format for easier use at the incident. They will have already been assessed and tested. The emergency services are obliged to take action because the information is good...as opposed to 'inaction', because the systems are too wieldy or not well thought through.

Additional areas of learning and opportunities to deliver improvement include: better understanding of regulator expectations, having the right tools available to aid decision making, integrating security and safety incident management, clearer declarations for on and off site events and exercising site plans. For more information please contact Gary at: ***gary.cooling@falck.com***

Chemicals and the Government's white paper

At the latest CNW REACH discussion group meeting held on 25 July 2018, Jenny Butcher of CIA updated on the latest Brexit developments in relation to chemicals and the REACH review. The timeline leading up to and following on from, the October 2018 EU Council meeting is well known to many, with the March 2019 deadline for "deal or no-deal" not far away.

In terms of associate membership of EU regulatory schemes it is now referred to as "UK participation" and the extent of the UK's involvement over the years has been significant. Between 2012 and 2018, the UK carried out the 3rd highest number of substance evaluations under REACH.

The Government's 'white paper': "The future relationship between the United Kingdom and the European Union" includes a focus on regulatory consistency around chemicals. It proposes that all manufactured goods authorisations/approvals/certificates undertaken under EU law completed before the end of the implementation period should continue to be recognised as valid in both UK and EU.

No changes were proposed to REACH's main terms following the second review. The main issues and actions identified for industry include: to address insufficient compliance with registration requirements, the need to improve workability and quality of extended safety data sheets and to improve the tracking of substances of concern in supply chains.

Mark Pemberton of **GlobalMSDS** introduced a new way in which users can access regulatory chemicals data called "ChemReg.net". This is a non-commercial initiative and entails access to all regulation around world. Mark has developed an internet-based service that uses Google language recognition software. It has a database of 20,000+ regulations across 130 countries and enables searching and reading of documents in any language. It is free for anyone to use. Read more on p.28.

Desmond Cave of **BioReliance Ltd** outlined the progress of study requirements being observed since the last deadline of 31 May 2018, they are now starting to see evaluations from 2013, mostly for in vivo studies.

A busy summer for Responsible Care in the northwest

Responsible Care

The Merseyside & North Wales Responsible Care cell met at Sci-Tech Daresbury on 11 July 2018, when discussion topics included management of organisational change, intervention plans and inspections and flood risk. There were also some good pointers around loss of containment control improvements, such as bund level sensors and alarms, electronic systems and remotely operated shut off valves.

This year marks the 30th anniversary of the Piper Alpha disaster, which resulted in the loss 167 lives. The group discussed process safety standards, assessments and audits completed on their sites, with experiences and learning's shared. The session was concluded with a short video of the survivor's accounts of the disaster, and the recommendations made by Lord Cullen in his inquiry related to process safety; permit to work; isolation of plant under maintenance and handover in addition to safety culture and emergency preparedness.

CIA Responsible Care Executive, Aila Bursnall, gave CIA feedback related to this year's priorities and early notice of the publication in the autumn of CIA's Mental Health and Wellbeing signposting guide, for sites to use in developing their strategy.

Meanwhile the summer meeting of the Cumbria Responsible Care group was held at GSK offices in Ulverston on 16 August 2018. It was at the time that the Environment Agency explained that local resources were focussing on the drought situation. Permit charging, waste and the IED BREFs were also discussed. The Health & Safety Executive, talked through it's workplace fatality statistics and the impacts of an ageing workforce on businesses. Cyber security revised guidance and the COMAH Establishment Profiling, Targeting and Strategy were also explained. The round table discussions opened with a long discussion on drug and alcohol policy creation and implementation.

On 20 September 2018 the Mid Cheshire and Manchester Responsible Care cell met at Sci-Tech Daresbury. It was a full house with a review of injuries resulting from slips trips and falls, and manual handling. There was some discussion around the latest intervention topics and programmes, management of contractors particularly during demolition and shutdown projects, and radiofrequency risk assessments.

Aila facilitated a special session on Managing Organisational Factors (that relate to health), the person, organisation and job factors of relevance, and the current COMAH Delivery guide and Human Factors guidance.

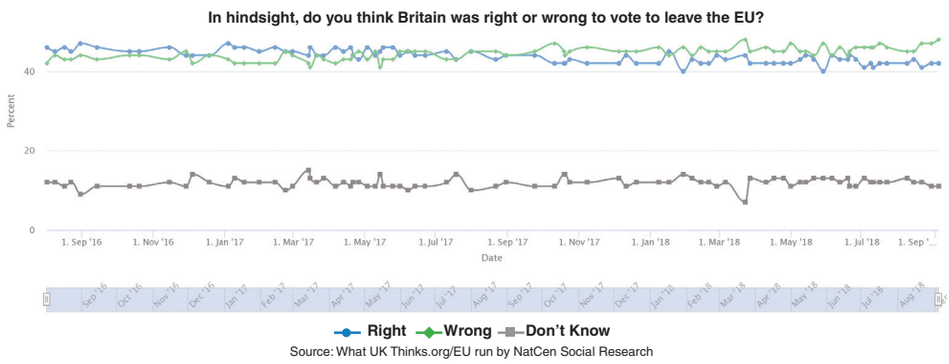
There was an assessment of the factors to consider when designing an effective shift work system.

The Health & Safety Executive gave an update on the current status of regulations with respect to Brexit, the availability of a planning advice app. for hazardous substances, and the new edition of Workplace Exposure Limits (EH40). The Environment Agency has opened a consultation on assessing and scoring permit compliance and the data collection period for the Common Waste Gas Treatment (Chemicals) BREF.

For more information please contact Aila at BursnallA@cia.org.uk

Brexit group

Dr Kathryn Simpson of **Manchester Metropolitan University** provided an insightful review of the original Brexit referendum that focused on attitudes and the UK regions.



Source: What UK Thinks.org/EU run by NatCen Social Research

Since 1973, the attitude of UK people to joining the EU has always been less favourable than our EU counterparts with 2015 figures showing that 40% of the UK felt it was a good idea compared to 50% in the EU. It is generally felt that the UK failed to grasp the broader European integration over the years as a political project as well as an economic initiative. Attitudes were not just shaped during the six weeks of the original referendum campaign but what is interesting is that such attitudes to EU membership affecting the vote, differed across the UK regions.

"No deal" means the Withdrawal Bill crashes and no transition period will apply. We will then go to WTO rules from April 2019, resulting in a predicted 8% reduction in GDP. Extending Article 50 has been suggested but most feel there is little appetite for this either. As the Chequers white paper now goes forward, the hard negotiating work continues. The October 2018 European Council meeting will be significant and crucial.

Lee Vousden from the Chemicals Unit at **BEIS** outlined the shorter-term political process starting with the above mentioned white paper: "UK proposal for the future relationship with the EU", which can be viewed at the www.gov.uk website. The UK Government recognises that the chemicals sector is an important player in the UK economy and its priorities will be to ensure the continued effective and safe management of chemicals to safeguard human health and the environment. To also respond to emerging risks and allow trade with the EU as frictionless as possible. The Government is also seeking active participation in ECHA so businesses continue to register chemical substances directly rather than via an EU-based representative.

A new Chemicals EU Exit group has been formed. Co-chaired by the BEIS minister and involving ministers of DExEU, Defra and DIT. It aims to develop a detailed evidence base of potential impacts of Brexit and to use industry expertise to better understand the sectors future EU economic partnership and trade priorities. BEIS would welcome case studies, concerns and scenarios from CNW members and other chemical companies. Funding is available for Defra to prepare for the building of UK REACH IT system, in readiness for the above ECHA engagement not being possible.

Adam Johnson of **Grant Thornton LLP** explained the timeline of the Brexit process so far and for the coming years, in the context of the political, societal and economic landscapes. He also explored future possible Brexit scenarios other than the "no-deal - cliff edge" option; a) orderly Brexit with a Free Trade Agreement with the EU after the transition period or, b) Soft Brexit as UK stays in a single market (EEA membership) and customs union. His advice is to prepare for any Brexit outcome and be ready to act. Exploit your competitive advantages, seize new opportunities and mitigate exposure.

Left to right: Adam Johnson, Dr. Kathryn Simpson, Lee Vousden

Awareness of chemical regulations – a first step to raised compliance

The global chemical business has grown from $171 billion in 1970 to $3.4 trillion in in 2016 and is expected to be $6.3 Trillion by 2030. This growth has been accompanied by notable incidents and accidents involving chemicals[1] that has led to raised societal concern over the potential risk to health and environmental of chemicals and the development of global chemical management programs, conventions and institutions at the international level and Governmental laws and institutions at the national level.

This increased volume of the chemical industry combined with complexity of regulation led to the global recognition at the World Summit in Johannesburg in 2002 of the need to "use and produce chemicals in ways that do not lead to significant adverse effects on human health and the environment". This objective was reaffirmed in Rio de Janeiro in 2012 and led to the development of the Global Harmonised System (GHS) – a single worldwide system for classifying and communicating the hazardous properties of industrial and consumer chemicals that sits alongside the UN 'Transport of Dangerous Goods' system.

Unfortunately as a compromise to accommodate existing laws and systems, GHS was conceived as a modular system allowing for phased-in implementation of so called "building blocks" and the use of "adaptations" to recognise existing legislative requirements. As a consequence implementation of GHS has been delayed and reality falls short of the original vision of a single global system since there are different hazard communication requirements, rules for classification and formats for Safety data Sheets (SDS) and labels in different countries. For any chemicals' business trading in the global market it is a growing challenge to maintain awareness of these complex regulatory requirements and to comply with them.

Within the EU the World Summit "2020" vision was implemented in the form of the EU REACH (Registration, Evaluation, Authorisation and restriction of CHemicals). REACH is by far the most complex piece of legislation implemented within the EU and flows into other Community and EU national legislation. Its success has also triggered the development of new regulatory schemes/ amendments of existing regulations in other countries (China, Korea, Malaysia, Russia, Taiwan and Turkey). These are often referred to as being "REACH-like" since they have several features in common with EU REACH. However, these systems also contain significant differences so are far from being globally harmonised. In this way they add further to the burden already imposed by the hazard communication (GHS) requirements.

Looking to the future of chemical regulations some general trends are apparent. Firstly, there is a growing perception that prior/ existing regulations were not adequate and that regulatory intervention is required before chemicals are placed on the market. This is often termed the "Precautionary Principle" under which chemicals are regarded as hazardous unless proven otherwise. Secondly, there is a need to generate and share expensive hazard data with other registrants and assessors. Thirdly, as the chemical assessments become more sophisticated there is a move from hazard evaluation to risk assessment, which brings with it the requirement for exposure assessment. It is inevitable therefore, that regulations will become ever more complex in the future and this will inevitably lead to greater cost to industry.

Although the outlook might appear gloomy, initiatives have been taken to counter this trend and promise some relief to chemical manufacturers and suppliers. Perhaps the first step in raising compliance with regulations is raising awareness to their existence. In this regard the only recourse to companies to date has been to subscription to expensive regulatory data providers putting it out of the reach of many SMEs and micro enterprises. This is a thing of the past since the launch of ChemReg (https://ChemReg.net) since it gives free access to over 20,000 global chemical regulations in 130 countries. Use language recognition and translation software allows both searching within regulations in any language and translation into over 113 languages. GMSDS Ltd aims to work with governmental agencies and industry sector groups to maintain this database going forward with the aim of promoting regulatory awareness and compliance thereby ensuring the sustainable growth of the chemical industry in the future.

Author: Mark Pemberton

[1] *https://en.wikipedia.org/wiki/List_of_industrial_disasters*

Hosokawa Unveil £600k Investment in Smart Powder Processing

Hosokawa Micron has recently invested £600k in two new control systems incorporating the latest digital manufacturing technologies within their Contract Manufacturing Facility in Runcorn.

'Our challenge to meet future contract processing demands through improved product quality and yields, minimise unplanned plant downtime and maximise plant availability and production flexibility is reflected throughout the processing industries. This investment demonstrates how we achieved our goals and in doing so enabled us to develop a proven route for smarter manufacturing that we can share with others,' explains MD, Iain Crosley.

This first stage investment has generated an all-time high on-specification production rate and 95% 'right-first-time' rate at the Runcorn contract manufacturing facility and plans are already in place for additional developments to further enhance the service. For Hosokawa the new advances offer the potential for greater throughput to meet growing demands for contract processing services.

Remote monitoring facilitates equipment health monitoring and predictive diagnostics for early warning of equipment problems before they impact plant operations and minimise negative effects on production of equipment failures. Operating data and diagnostic alerts are available via the Hosokawa Gen4 App, which provides guided trouble shooting and remote support by Hosokawa engineers, anytime of the day – keeping operational delays to a minimum.

'By linking process equipment and controls we can understand, monitor and control our contract manufacturing plant. Sensors capture real-time, essential operating data. This is analysed and interrogated to provide insight into all aspects of the plant's production performance, identifying underperforming equipment and the status of individual assets. Access to this knowledge aids strategic decision making, scheduling, predictive maintenance and operational availability.'

'The rate of change in smarter manufacturing technologies is escalating. Powder processors cannot afford to be left behind with implementation. Our 50+ years of processing knowledge plus our digital technologies experience and expertise is available to the wider process sector through our new business unit, **Hosokawa Gen4**. This capability combination is not available elsewhere.' says Iain Crosley.

With additional investment for further development already approved, Hosokawa Micron continues to strive to be at the forefront of the Smart Factory revolution.

Catalyst set to transform with funding from ISF

Catalyst Science Discovery Centre is thrilled to announce it has been successful with a grant application of £754,600 from the Inspiring Science Fund. With additional match funding this will mean a total project investment of £1,078,000 for the Widnes based centre.

The ISF scheme, which is co-funded by BEIS and Wellcome, supports science centres across the UK. It is a capital fund that helps centres rethink what they do and what they offer to the public. Jayne Edwards, Director of Catalyst said "This project entitled 'Catalyst for a future generation' will explore ground-breaking thinking about the relationship between science and wellbeing. We will involve all ages of the community and local partners in the innovative design of our spaces and exhibits to inspire a future generation of scientists across the North West and beyond, using new methods of experimentation and discovery."

MP for Halton Derek Twigg said "I am delighted to hear that Catalyst has been awarded the grant from ISF. Catalyst has been an integral part of the social and cultural landscape of my constituency of Halton and the wider Northwest for the last 30 years. I look forward to seeing Catalyst transform with the involvement of the local community, and continue the excellent work it does to inspire young scientists."

Chris Tane, CEO of Inovyn congratulated Catalyst on the success of their funding bid to transform the centre. "Catalyst's role in encouraging young people to consider a career in science is vital to industry and wider society and we look forward to continuing our close relationship in these exciting times."

Science Minister Sam Gyimah said "We want to bring the wonders of science to as wide an audience as possible and that's why it is at the heart of our modern Industrial Strategy. Today's investment will help inspire people from across the country to learn about the truly amazing benefits that science and technology has on all our lives." Catalyst is one of six centres that is to receive funding from the final round of ISF.

spotlight *on new members*

E.ON Energy Solutions

Since the 1960's we have been providing Within the UK we are seeing increasing examples of existing CHP plants reaching a critical point in their lives. Having reviewed a number of these recently they all face several obvious issues centred around age as well as sub-optimal operation caused by a drift in site energy demands away from the original design point and constrained operation. In all cases there is an "energy gap" that leaves a customer more exposed to energy market risks: rising grid network charges, de-carbonisation costs and "spark" spreads that exacerbate costs for a less efficient power plant.

Using E.ON's experience in providing energy solutions we are able to transform your energy into a source of competitive advantage for you, leaving you to focus on your core business.

From the concept, design, procurement, financing and implementation to operation and maintenance - E.ON supports your on-site energy generation project across the entire value chain. We provide tailor made solutions which means we are able to guarantee the best possible technology for your requirements and in doing so, optimise your energy plant, significantly reduce your operating costs and improve your carbon footprint.

On-site power generation through a CHP plant will provide your site with independence from electricity suppliers, reduce your grid charges, duties and taxes and often also take advantage of government subsidies.

If you are responsible for a large industrial site and want to learn more about how E.ON can help you optimise its energy supply, please contact me.

e·on

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WorleyParsons

WorleyParsons' Manchester provides a core service for greenfield and brownfield operations focused on the delivery of large and small projects, upgrades, de-bottlenecking, and support services to sustain assets and improve business performance. From consulting on a single project or issue, through to delivering some of the largest and most complex programmes and facilities, everything we do is designed to help our customers achieve their business objectives with the best value solutions.

Our offices offer our customers a diverse range of capabilities to the chemicals, oil & gas processing and production, LNG, offshore and environmental sectors. Our regional offices enable us to offer customers local expertise and close geographical proximity as well as the broad range of resources offered by the global group. They are accredited to ISO 9001:2015 and ISO14001:2015 and Achilles FPal and UVDB.

WorleyParsons UK can provide the following specialist services:

- Concept, pre-feasibility and feasibility studies, FEED, EPCM, P, CM
- Process licensor/EPC contractor coordination
- Environmental impact assessments
- Owners engineer, master planning
- 3D laser scanning & 3D modelling
- HAZID Analysis/HAZOP/SIL Study
- ATEX & PER compliance
- Pressure relief study
- Fire & explosion risk assessment
- Dispersion modelling
- Terminals & jetty topside facilities design
- LNG/LPG/ambient storage tank design
- Construction management services

Our OneWay™ framework gives us the flexibility to safely support the operations of our customers through project execution from engineering and design through to site construction and add value to our combined visions for health, safety and the environment.

WorleyParsons
resources & energy

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Falck Fire Services UK

Falck Fire Services UK's Industrial Emergency Response team delivers a range of world class services to customers in a variety of industrial manufacturing sectors. The team prides itself on the quality of the services it delivers to companies at the heart of chemical, petrochemical, oil and gas, energy, bio fuel and biotechnology production in the UK.

Our services include:

- Industrial firefighting – the business operates with an elite force of highly trained industrial fire fighters working with some of the best equipment in the world, capable of tackling the most serious of incidents.
- Chemical spill response – response teams have people with the knowledge, skill and equipment to mitigate any on or off site chemical spill emergency.
- Industrial medical emergency response – site protection officers are skilled medics equipped to save lives in situations including those where high-level rescue or entry into a confined space is required.
- Site security – working in partnership with world class security experts to ensure customer premises are protected from ever increasing local and world-wide threats.
- Exercises, training and auditing skills – a widely acclaimed team of practitioners who have helped hundreds of customers across the UK and the world in improving emergency response capabilities.

Operating from our base in Teesside, we are widely recognised as possibly the most competent privately owned industrial emergency response team in the UK and have gained a number of external accolades over the years. The business has played a vital role in resolving some of the UK's most serious industrial incidents and can draw upon more than 60 years of Industrial experience.

Contact:
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It ain't half hot!

Remember the long hot summer? Delegates braved the soaring morning temperatures to network and hear four high quality member pitches at Chemicals Northwest's breakfast networking meeting on 27 June 2018.

Left to right: Tony Stangroom, Janet Perkins, Faye Alison, Daniel O'Toole

On behalf of new CNW member **Cape** (now known as **Altrad Services**), Tony Stangroom provided the corporate background to the recent acquisition process which has resulted in the formation of a major global engineering company with £3.4bn turnover and employing 39,000 staff. The range of services provided includes: the provision of engineering personnel to UK COMAH sites, turnaround and construction projects, access and insulation.

Daniel O'Toole representing business advice firm **Grant Thornton LLP** explained the importance of tax relief on research and development (R&D) as a major contribution to innovation in a business. The definition of R&D for tax purposes states that projects must seek to advance science or technology through the resolution of scientific or technological uncertainty. This applies to product development and process improvements. The Small Medium Enterprise (SME) relief can reduce a company's corporation tax liability by up to 26% for every qualifying R&D £1 incurred.

Award-winning **SRG** have several specialisms in the world of recruitment. Faye Alison described the need to add value to a client's search process for scientific roles. SRG recently worked with the publication, "New Scientist" to carry out a survey on job related issues. The survey found that the average salary in the science and engineering sector was 25% higher than the national average.

Janet Perkins introduced translation company, **TW Languages Ltd**, one of the leaders in scientific and technical translations. Janet outlined how software is so advanced that computers can now reliably translate documents at significantly higher rates than humans, but there still is the need to carry out internal checks and post editing. The company is now accredited to the international standard for translation services, ISO 17100.

The return of a Definition of Waste assessment service

We all know what we mean by "waste" – something unwanted, to be got rid of. The legal definition is in essence: if the person generating a substance discards it, intends to discard it, or is required to discard it, then the law will probably classify it as waste even if it has some value. But "is it waste?" decisions are not always clear-cut, for example in the case of by-products, production over-runs or waste that has been treated. This matters because of the regulatory burden and cost applicable to anyone handling waste, and the restrictions included in many environmental permits.

Needless to say, the Environment Agency tends to take a more stringent approach to "end of waste" decisions than most businesses that are either trying to find a more cost-effective alternative to disposal of a production residue or source a cheaper, waste-derived raw material or fuel.

If a waste material is treated sufficiently to become a distinct and marketable product that can be used in exactly the same way as its non-waste equivalent, and can be stored and used with no worse environmental effects, then it ceases to be waste.

Although the courts are the ultimate arbiter of such decisions, most operators would not proceed with an expensive project involving treated waste without Agency approval. The EU has tried to encourage the beneficial use of waste by issuing End of Waste Regulations for a limited number of materials, and in the UK Quality Protocols have been developed for a wider range of materials and end uses. Provided a waste-derived product meets the specified criteria, it is deemed to be a non-waste.

Where no relevant end-of-waste criteria have been laid down, it is up to the would-be producer or user to make a case to the Agency.

The Agency has recently reintroduced a Definition of Waste assessment service – for a fee. Anyone wishing to obtain the regulator's opinion on their specific waste-derived material and proposed end use can apply via the online IsItWaste tool. As ever, we recommend that applicants take great care to maximise the evidence in their favour before approaching the Agency.

For more information contact: *paul.bratt@symmetrylaw.co.uk*
victoria.joy@symmetrylaw.co.uk

Supplying to the Chemical Industry

Knowing your local supply chains is important, and suppliers of expertise, solutions and great products are right here in the northwest. CNW members have a strong association with and many years of experience supplying to the chemical industry. The companies listed in this directory cover a wide range of products and services. They have established customers in the sector, with proven track records. Many will be well known, long-standing firms and there will also be new and innovative businesses that you may not have heard about. Effective supply partnerships, delivering success for all! For more details, the websites for the listed companies and organisations can be found at:
https://www.cia.org.uk/chemicalsnorthwest/Membership/Our-Members/

Distribution, logistics & chemical handling

2M Holdings Ltd
Chemical distribution and related services of sample management, storage and blending. Provision of AdBlue, Samsol products, packed chlorine and TRIKLONE & PERKLONE chlorinated solvents. Markets served include: automotive, precision cleaning, coating, oilfield & refineries, flavours, fragrances, surfactants for personal care, household and industrial cleaning and pharmaceuticals.

Actikem Ltd
An ISO9001 certified business, specialising in a range of chemical processes and manufacturing services, including mixing, storage and re-packaging. We provide toll and custom manufacturing services for SMEs as well as blue-chip organisations, and supply customers with on-tap production facilities, offering them potential cost-savings and greater flexibility.

BakerCorp UK Ltd
Provision of rental products for transfer, storage and treatment of liquids. Specialising in liquid management solutions for demanding operations, with focus on the tank, pump and filtration product lines. From a single-product storage project to setting up an integrated multi-product solution. Initial chemical compatibility checks, 'job walks', CAD drawings and rigorous equipment maintenance schedules.

Brenntag UK & Ireland
Connects chemical manufacturers and chemical users in a value-adding partnership through tailor-made distribution solutions. Offers specific application technology, extensive technical support and value-added services (i.e. just-in-time delivery, product mixing, formulation, repackaging, inventory management and drum return handling). High safety standards and strives to make served industries sustainable.

Hosokawa Micron Ltd
Integrated powder processing technologies including: size reduction, air classification, mixing, drying, containment equipment such as glove boxes and downflow booths. Contract processing services for 1kg to multi-tonne lots. Remote monitoring solutions that include: condition monitoring, analytics for improving product quality and energy efficiency and on-line diagnostics for predictive maintenance and improved plant availability.

Innovative Packaging Solutions Ltd
A top tier COMAH operation offering many handling services: re-packaging of any class liquid chemicals from bulk isotankers, road tankers, IBCs and drums. Decanting, dosing and sampling. Packaging: HT pallets, strapping and shrink wrapping. Labelling of receipts and despatches. Storage services including: inside, outside or temperature controlled.

Kanon Liquid Handling Ltd
Design and manufacture of drum, IBC and container filling systems ranging from fully automated robotic systems to simple manual machines. Full range of marine, road and rail tanker loading/unloading and safe access equipment. Distributor for Mann-Tek couplings, with repair facility and a 'return to base' option.

Rain for Rent International UK
Temporary liquid handling solutions including newly designed storage tanks, filtration units and spill containment. Combining a storage tank with E-Contain Spillguards, Spillguard Hose Bridges and SolidGround Traction mats will provide a complete containment system protecting your workforce, project and the environment.

Warrant Group Ltd
Freight and logistics services and a founder member of EURTEAM, a dynamic, chemicals network specialising in international supply chain solutions for the chemical sector. CDI accredited and hold AEO status. Customer service staff hold hazard familiarisation certificates. Diverse chemical sector client portfolio, each with different complexities and a bespoke solutions requirement.

Education, training & skills

All About STEM
Lots of different projects to bring exciting Science, Technology, Engineering and Mathematics to schools across the region, linking them with business and industry expert volunteers inspiring the next generation of STEM specialists. Building and maintaining relationships with our schools, businesses, industry, colleges and universities so that we can strategically match-make opportunities with need.

Catalyst Science Discovery Centre
An independent charitable trust playing a pivotal role in promoting science across the Northwest. Catalyst works in conjunction with industry partners to excite young people about all STEM subjects and careers available within the science sector. Companies can also sponsor a local school to visit and attend industry days.

Centre for Industry Education Collaboration
CIEC supports companies in making credible and sustainable links with primary schools, in order to inspire the next generation of scientists and engineers. We train STEM professionals to improve their communication skills, and develop industry-focused activities for use directly by teachers or by ambassadors visiting schools.

Chemistry with Cabbage
We work with students of all ages, demonstrating through practical experiments, the relevance of chemistry in solving problems. Research shows that children make career choices very early on, so capturing their imagination early is important. Chemical companies are welcome to support our hands on work in primary schools.

EngineeringUK
Not-for-profit organisation promoting the contribution made by engineers to society. We partner business and industry, government and the wider science & engineering community, producing evidence of the state of engineering. Sharing of knowledge and inspiring young people to choose a career in engineering.

Manchester Metropolitan University
Vocational training and applied research. The Division of Chemistry and Environmental Sciences trains undergraduate and postgraduate students in chemical, environmental, pharmaceutical and polymer science and technologies. Continuous professional development, consultation services and contract research facilities.

SEERIH
The Science & Engineering Education Research and Innovation Hub positively influences the experience of young people in science and engineering. Expertise in curriculum and teacher development, applied research and creation of innovative projects related to primary science and associated STEM disciplines. Inspiring excellence in teaching and learning in science education.

The Outward Bound Trust
An educational charity that uses the outdoors to help develop young people. Experts in the development of early talent and specialising in providing experiential learning and development programmes for apprentices and graduates. Identification, development and change of people behaviours in line with organisational needs.

TTE Training Ltd
Engineering training and apprenticeships focused on whole person development and bridging the sector's skills gap. The learning environment will be one which is welcoming, safe and inspiring, appropriate to the subjects and responsive to the needs of the learner.

University of Chester
Faculty of Science & Engineering offers new degrees in chemical engineering, electronic & electrical engineering, mechanical engineering, natural sciences alongside established degrees in mathematics and computer science. Close links to local chemical companies with student placements and collaborative research projects.

Wirral Met College
Provision of education and training, supporting innovation and development. The College is pioneering SIP traineeship programmes with local employers, preparing young people for science apprenticeships. New STEM Centre opened in 2016.

Engineering products & services

Altrad Services
An international leader in the provision of critical industrial services principally to the energy, infrastructure and natural resources sectors. The multi-disciplinary service includes access systems, insulation, specialist coatings, passive fire protection, engineering services, refractory linings, environmental services, oil and gas storage tanks and heat exchanger replacement and refurbishment.

Know your supply chains

Chem Resist Group Ltd
Design, manufacture and installation of corrosion resistant process plant. A wide portfolio of thermoplastic process plant, an extensive range of pumps and ancillaries and complete pipework installations, upgrades and repairs. Aggressive and corrosive applications for pumps (1m3/hr to 1000m3/hr, heads to 100m) valves and level controls.

CRANE ChemPharma & Energy
A global manufacturing and sales organisation supplying a wide range process equipment and fittings, including DEPA air operated diaphragm pumps and ELRO peristaltic pumps.

DHD Cooling Limited
Design, installation and maintenance solutions for industrial cooling. Our service extends to cooling system inspection, testing, service, maintenance and new equipment capability. Regulatory and reliability assessments, thermal performance improvements, turnkey projects and carbon footprint reduction.

Dron & Dickson Ltd
The supply and maintenance of hazardous area electrical equipment. Working together with our clients, our Engineering Services Management and Wholesale divisions are able to offer bespoke solutions incorporating the very latest industry standard and safety legislation. From initial concept, incorporating the latest products from the leading manufacturers with tailored maintenance solutions.

Glacier Energy Services
Onsite Machining; design and manufacture of equipment for precision pipe cutting and onsite machining. Heat Exchanger design, manufacture, repair and refurbishment. Welding. NDT services performed by highly qualified technicians. Provision of turnkey solutions in respect of surface and subsea production equipment.
Great customer value, highest standard of service and best-in-class HSEQ performance.

HTS Engineering Group Ltd
Process safety and safety instrumented systems, delivered with a high level of engineering and expertise with cost efficiency. Four key engineering services that can be tailored individually or as one complete solution: process control & software engineering, engineering & design, site installation and inspection services.

ICAM Engineering Ltd
Enviable track record in producing high quality, safety critical products and services, which include; orbital welding, manual TIG & MIG welding, machining both CNC & manual, electro-polishing, installation/modification of gas & fluid handling systems, instrumentation cabinets & panel assembly and 3D engineering design.

Laker Vent Engineering Ltd
Supply, fabrication and installation of process and utility piping systems. Project management, detailing, procurement, on and off-site fabrication and installation of pipework and coded welding. Associated steelwork supporting and mechanical installation of plant and equipment. Testing and handover. Pipework and steelwork is fabricated to specific customer-needs and conforms to all appropriate ISO, BS EN and ASME standards and specifications.

Lokring Northern (UK)
Special mechanical fitting system that produces a permanent weld equivalent pipe connection, eliminating the need for hot work, NDT and associated health and safety issues. Lokring fittings are code qualified to ASME B31.1, B31.3 and other industry standards. A proven cost saver compared to traditional welding and fabrication methods.

Manntek AB
Supply of safety dry disconnect and safety breakaway couplings. Comprehensive range of specialist dry quick release couplings to suit 99% of known chemical applications. Bespoke solutions with a size range of ¾" to 8" nb. Dry disconnect couplings are made to NATO standard Stanag 3756.

Oranmore Environmental Services Ltd
Full turnkey solution for above and below ground infrastructure, ranging from structural surveys to full repair and maintenance of drainage systems, chambers, sumps, pipes, tanks and associated assets. Minimum downtime and disruption for our clients.

Perry Process Equipment Ltd
Buying and selling of high quality used processing plant and equipment. Savings of up to 70% on the cost of process equipment, full mechanical and electrical refurbishment and equipment immediately available form stock. Centrifuges, dryers, evaporators, filters, heat exchangers, mills, mixers, reactors, separators, tanks.

Swagelok Manchester
Fluid system solutions, products, training and services. Supply of over 7000 fluid system components including; fittings, hoses, tubing, regulators, equipment servicing and custom fabricated solutions. Provision of practical information, know-how, tools and speciality services needed to purchase, manage and apply them successfully.

Engineering project management & energy

Bouygues E&S Contracting Ltd
Specialist lifecycle solutions partner offering consultancy. Multi-disciplinary services include: design, architectural, civil & fit-out, construction, mechanical engineering, HVAC & building services, electrical engineering, commissioning, integrated system test and facility management.

E.ON Energy Solutions
As experts in Combined Heat & Power (CHP) we take the time to understand your core business drivers to shape an economically optimised energy solution that supports your long-term strategy. We're at the forefront of energy markets, driving change in response to global mega-trends, including digitalisation, decentralisation of generation, the de-carbonisation of heat and power, and Industry 4.0

Fichtner Consulting Engineers Ltd
International engineering and project management. Provision of mechanical, electrical, process and chemical engineering design services. Strong focus on thermal combustion and full range of processes associated with power applications. Recent growth in renewable energy sources such as: solar, anaerobic digestion and onshore wind projects.

Otto Simon Ltd
Diverse engineering consultancy and project delivery organisation. Initial consultations, technical and commercial due diligence and front end design and definition. Feasibility studies through design, supply, erection, and commissioning services using in-house and licensed technology. Services for complete plants or upgrades. Procurement, construction management, start-up and operation & maintenance expertise.

PM PROjEN
A multi-disciplined engineering, design and project management business working across a range of market sectors for a diverse mix of clients from SMEs to multinational blue-chip companies. Part of PM Group, a 2,200 strong, employee owned company operating across Europe, Asia and the USA.

WorleyParsons Resources & Energy
A professional services company delivering, concept, prefeasibility and feasibility studies, FEED and Detail Engineering, Procurement and Construction. We also offer a wide range of advisory services. We support the chemicals, hydrocarbons, infrastructure and minerals & metals sectors over their full lifecycle, providing end to end services.

Engineering, IT & process consultants

ABB Consulting
Technical and engineering services to help companies in the global process industries achieve operational excellence. Expertise in inspection, integrity management, operations improvement, process safety, project services, site and asset regeneration, technical engineering, software and training and competency. Pragmatic solutions based on technical excellence and industry expertise.

BPE Design and Support Ltd
Progressive and innovative process engineering consultancy. Extensive process development and scale-up experience and process modelling and simulation is a core expertise. Early stage concept and feasibility studies as well as subsequent design, commissioning and qualification stages. Independent HAZOP chairing, ATEX/DSEAR assessments and SIL/LOPA studies.

Gexcon UK Ltd
Safety and risk management and advanced dispersion, explosion and fire modelling. Unique expertise and shared knowledge on how to prevent explosion accidents. Carrying out accident investigations and dedicated facilities for physical testing. Ventilation and dispersion modelling also available. Hazardous area classification and quantitative and qualitative risk analysis and assessment.

HFL Consulting Ltd
A unique blend of leadership, management, consulting, engineering and training services is offered to the chemicals industry. A forerunner in sustainable process safety management combined with proven business improvement capabilities enables delivery of practical solutions to promote safety and efficiency in design, operation and maintenance of complex hazardous facilities.

Peak42 Ltd
Process control, industrial automation systems and manufacturing analytics. A unique combination of automation projects, consultancy, and performance improvement services delivered by experienced teams. FEED, process control projects, legacy asset replacements, control room and operational technology, modern manufacturing analytics solutions.

Reliable Manufacturing
Reliability-based change management consultancy. A pragmatic approach delivers improved asset availability, reduced operating costs, improved HSE performance and increased employee motivation and satisfaction. Support with implementation of operations and

maintenance best practices which facilitate organisational cultural change. A unique range of effective workshops, tools and masterclasses, help get the messages over.

Siemens Digital Factory & Process Industries and Drives
Productivity and efficiency requirements continuously increase in the field of process automation. A comprehensive range of process automation and Drives products as well as an award-wining range of training and support services.

Terrington Data Management
Provision of mobile computing and software systems that enable users to implement effective maintenance and Ex inspection strategies. Software helps users demonstrate compliance with increasing legislation such as DSEAR/ATEX 137. Use of rugged PDAs, android devices and RFID in collection of management of safety critical data, provides an auditable asset history.

Environment, health & safety risk management

BakerRisk Europe Ltd
Dedicated to help predict, prevent and mitigate hazards and explosions, fires and toxic releases. Specialising in process safety and risk management, we help clients understand their risks and offer cost-effective risk management solutions. Success is delivered through proven knowledge and experience, innovative research and unique engineering capabilities.

Chemical and Industrial Consultants Association
An association of independent consultants with extensive experience, many having worked in the chemical industry, across various fields. Provision of technical and business advice on almost every aspect of chemical manufacture, development, marketing and management.

Haztech Consultants Ltd
Integrated solutions in process safety management, hazard identification, risk assessment, regulatory compliance support & training. A 6-stage Hazard Study process, safety cases, human factors studies, basis of safety criteria, occupied buildings studies and SIL assessments. Compliance training for COMAH, ATEX & DSEAR, EPR and SED.

HSD Safety Ltd
Valued experience in providing accurate analysis of hazards, identification and assessment of controls and pragmatic advice for further improvements. Services include: hazard identification (PHA, FTA, FEMA, HAZOP, LOPA/SIL, QRA), fire risk assessments, COMAH/Seveso support, bespoke training and legal representation.

RAS Ltd
Expertise that covers the full range of risk assessment and management services across; safety risk, business risk and environmental risk. Carry out Quantitative risk Assessments and Predictive & consequence modelling, through 'softer' risks affecting an organisation's reputation.

RPS Group
Provision of specialist consultancy to help those with responsibility for health and safety achieve compliance. With particular expertise in the chemicals sector, we provide support from plant development through to operation. Core services include: ATEX/DSEAR, asbestos, BowTie analysis, CDM, COMAH support, fire safety engineering, functional safety, hazard identification, Legionella, occupation health and risk assessment/analysis.

Facilities, finance and other business services

ChemQuest Ltd
Sourcing and procurement solutions for research and development. Expertise in biochemical, chemical, nanotechnology, cell cultures, equipment, consumables and sundries. Streamlining and simplification of importing and purchasing processes.

Deloitte UK
Provision of the full range of financial and business services including: auditing & assurance, mergers & acquisitions, global business tax and strategic capital and human consulting. Expert risk advice is available in the areas of finance, operations, cyber security, regulatory and reputation.

Department for International Trade – Northwest
Operational support for British exports as well as facilitating inward and outward investment activity. Support is given to first-time exporters or established exporters requiring more help with accessing more difficult markets or putting strategic alliances in place. Access to expert advice, trade services, training and events.

Falck Fire Services UK
A leading, global and dedicated emergency services provider and fire-fighting specialist to high risk industries. Tailored outsourcing contracts and a high quality integrated fire protection system. Incident fire training courses for emergency response teams, including practical scenarios. Consulting services specialising in fire and explosion hazard management.

Grant Thornton UK LLP
One of the world's leading organisations of independent advisory, tax and audit firms. We help dynamic organisations unlock their potential for growth by providing meaningful, forward looking advice. Provision of assurance, tax and advisory services. A dedicated Innovation practice that has an enviable track record of working with successful and dynamic companies to realise their ambitions for growth.

Halton Borough Council
World renowned research facilities such as Sci-Tech Daresbury and The Heath alongside many companies at the cutting edge of science, technology and advanced manufacturing. We oversee capacity in terms of land, buildings, people and business support creating a world class location.

Miltec Digital Ltd
Bespoke marketing solutions that support lead generation, brand awareness and customer retention. Web development that highlights your brand to potential customers, search engine marketing to increase visibility, digital marketing and design & branding to showcase your products and services. Cutting edge platforms and state of the art marketing strategies.

Pen Underwriting incorporating OAMPS
Specialist Insurance services to high hazard manufacturing and haulage industries. Motor fleets, property, liability and transit policies. We help clients minimise risk through proactive risk management and a range of training and response services to assist companies in planning for and dealing with incidents and emergencies.

Sci-Tech Daresbury
We are a national science and innovation campus, and enterprise zone providing a range of office, laboratory and workshop accommodation for technology companies (from a desk to large laboratory and office units). Companies have access to a range of facilities covering material analysis, virtual design & simulation, and rapid prototyping.

STFC Innovations Technology Access Centre
A unique, fully equipped space for innovation, research and development. Providing flexible access to laboratory space, "hot labs" and scientific equipment. Ideally suited to start-up companies, smaller and medium size enterprises and R&D team from established companies.

Thornton Science Park
Enterprise Zone status offers cost effective corporate headquarters including research & development and manufacturing capabilities. Office space available plus fully equipped laboratory or workshop space. Innovation in energy, environment, automation and advanced materials. Business support through access to academic experts and student resource for short term projects or placements.

TW Languages Ltd
Provision of a professional and reliable multilingual translation service delivering high quality translations. We specialise in business, technical and scientific translations into 250+ language combinations. We provide certified translations for legal purposes. We are full members of the ATC & EUATC and ISO 17100 Translation Services certified.

Vision Consulting Group
Full service marketing consultancy focusing on strategic planning, tactical marketing and creative skills. Support in branding, CRM, research campaigns and proposition development. Direct marketing, public relations and event management. Expertise to help with copywriting, graphic design, website development and creative briefs.

Laboratory products, testing and services

BioReliance
A leading global contract services company in the area of product safety. We specialise in genetic toxicology screening and GLP assays. Whether requiring pre-clinical toxicology for hazard assessment for REACH registrations or other regulatory studies; BioReliance has all the expertise needed to design and execute your genetic toxicology.

Chilworth Technology Ltd
Process safety testing services aimed at helping companies avoid major incidents such as fire, explosion or loss of containment. Combining process safety engineering and management expertise with the use of test data allows us to help clients achieve the most effective and practical approaches to safe and efficient processes.

Kindlow Safety Services
Provision of process safety testing and consultancy. Understanding of needs to control hazards such as dust explosions, thermal decomposition and runaway chemical reactions. Fully equipped laboratory and experienced team help achieve your safe operating conditions. Other services include: HAZOP, aerosol safety, REACH testing and process safety training.

Labtex Ltd
Suppliers of leading laboratory products and process scale-up equipment. The list includes:

HUBER liquid temperature control systems, DIEHM glass reactors to 100 l, PREMEX and AMAR high pressure autoclaves, POPE wiped film or short path evaporation and distillation, Nutsche filter dryers and many more.

Smithers Viscient
Environmental testing and regulatory services, carrying out environmental, consumer safety contract research and regulatory services. Plant metabolism, aquatic ecotoxicology, avian toxicology, environmental fate, honeybee and pollinator testing, endochrine disruptor testing, residue, analytical and product chemistry.

XCellR8 Ltd
A world leader in animal-free testing. Our GLP accredited laboratory provides ground-breaking in vitro safety tests for the chemical and personal care industries. We are passionate about delivering testing strategies that are both scientifically advanced and ethically sound. Our award-winning work is recognised at a regulatory level by the OECD and ECHA.

Legal & patents

Appleyard Lees LLP
Patent and trademark attorneys. Aim to obtain the best possible patent protection for clients. Experience of product clearance against competitor patents and in due diligence for mergers and acquisitions. Advice on licensing issues and collaboration agreements relating to IP.

Bawden and Associates
A legal firm providing professional services across all IP matters. Drafting and prosecution of patent applications, handling opposition and appeals in the EPO and in litigation in UK and international courts. Business led and strategic approach to generate assets of real commercial value.

DLA Piper UK LLP
A global law firm located in more than 40 countries throughout the Americas, Europe, the Middle East, Africa and Asia Pacific, positioning us to help clients with their legal needs wherever these choose to do business.

E3 employment Law LLP
Specialising in employment law. The resolution of the full range of employment law and industrial relations issues to suit individual businesses. Delivering employment law advice which provides outstanding commercial value.

Marks & Clerk LLP
Intellectual property services, advising start-ups, SMEs and multi-nationals with large global IP portfolios. Comprehensive range of IP services covering patents, trade marks, designs and copyright. Obtaining protection worldwide, portfolio management, strategic and commercial advice, licensing, enforcement, due diligence, valuations and litigation.

RW Legal Ltd
Provision of pragmatic legal advice to companies in the chemical sector. Particular expertise in drafting and negotiating commercial contracts. Managing legal risk through early involvement to save time and resources in the long run. Competitive rates and flexible fees without sacrificing quality.

Squire Patton Boggs (UK) LLP
Global legal company providing legal, regulatory and advocacy assistance to the chemical and performance material industries. Expertise that emphasises areas that mean the most to industry such as environmental, mergers and acquisitions, commercial finance, construction, litigation, IP, public policy and international expansion.

Symmetry Law
Specialist law practice structured to provide "partner" level experts at "junior" level prices, with a focus on the 'high consequence' end of the spectrum. Legal services include: environmental, safety, regulatory, contracts, tax, construction, green incentives, litigation.

Withers & Rogers LLP
A leading UK and European intellectual property law firm with five offices including London and Munich. We offer a range of IP services including obtaining UK, European and worldwide patent or trade mark protection, the handling of contentious matters, advice surrounding licensing arrangements and issues including validity of patents and "freedom to operate".

WP Thompson
Intellectual property attorneys providing high quality advice to start-ups, SMEs or FTSE 100 companies. Team of experienced IP attorneys specializing in chemistry and life sciences, with first degrees and PhDs in these fields. Securing the most appropriate, cost effective and commercially valuable protection for your intellectual investment and innovation.

REACH and chemicals services

Baytouch Ltd
Internet-accessed subscription based services that support regulatory compliance in the global chemical industry. Solutions include: ProductTraq – substance volume tracking and supply chain management, PSMonitor – workplace safety management software for high hazard facilities, ReachSuite – SIEF management and other REACH complance features. Innovative software-as-a-service solutions.

Dr Knoell Consult Ltd
An independent service provider for the chemical and related industries. Globally the Knoell group has over 450 employees covering all aspects of regulatory compliance for industrial chemicals, agrochemicals and biocides: e.g., strategic planning, dossier preparation, exposure assessment, SDS preparation, and from REACH to K-REACH!

GlobalMSDS
A complete safety data sheet/literature and regulatory service for your entire product communications in any language, style and format required. HazMix® is a new 'pay as you go' web-browser product that is setting a new standard in SDS authoring. A Solutions service that also provides technical advice.

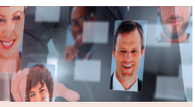
Intertek Regulatory Services
Health, environmental and regulatory services for implementation of chemicals management. Worldwide registration of chemicals, food contact compliance and notification, global chemicals compliance, design/optimisation of toxicological and eco-toxicological studies, hazardous substance management, EU cosmetic and biocidal products compliance, classification & labelling, SDS consulting.

SIAM (Soluciones Informaticas Ambientales)
Information technology and software solutions. Includes the software for the generation of SDSs, labels and transport documents in relation to European legislation. Assisting companies in compliance with regards REACH, CLP, GHS, etc.

Stewardship Solutions Ltd
Provision of chemicals regulatory services to organisations across many industry sectors and throughout the world. REACH and CLP compliance is a primary focus, and REACH registrations programmes are a core strength. The company has achieved significant savings in the costs of REACH compliance on behalf of many of its SME clients. Stewardship Solutions is a REACHReady-approved service provider.

The ACTA Group
Assisting companies with complex compliance issues under multiple regulatory schemes, including N American, EU, S American, Asian and Pacific rim regulatory programmes. Expertise in product approvals, product review and REACH compliance. Provision of REACH registration dossier submission, lead and joint registrations.

Recruitment



Airswift
Provision of international workforce solutions to the energy, process and infrastructure industries. Placing candidates into their ideal role; rehiring a contractor from one project to the next; mobilising people around the world quicker; searching and selecting a senior executive to fill a key position; or implementing an agile workforce strategy.

Hybrid Search
A search firm that can achieve outstanding results across commercial, engineering, operations, supply chain and procurement disciplines. Consulting practice delivering: team assessments using competency based assessment and psychometric testing, career transition workshops that provide guidance and job market intelligence and talent mapping & pipelining for future talent planning.

Science Recruitment Group
Experts in the recruitment of scientific, regulatory, quality, engineering and technical professional across all areas of the industry. Support in recruiting temporary, contract or permanent staff for your team.

TransitionPlus Ltd
Executive search for science based organisations, talent development, outplacement and career transition support. Experienced chair, NED, coach and business development consultancy. The "Plus" is to ensure that considerable attention and investment is given both before and after the recruitment to ensure that company culture and "fit" are clearly understood.

Waste management services

Avanti Environmental Group Ltd
Hazardous waste treatment and transfer and plastics recycling. Other industrial services offered include: site cleaning and decommissioning, tank cleaning and emergency response, oily sludge recovery and disposal (R code) and lab smalls disposal. Free site surveys to assess the most cost effective method of handling your waste.

Helping members to manage their
Climate Change Agreements

CIABATA

Key elements of CIABATA's role include:

- Helping new entrants to join the chemical sector CCA
- Working with participants to support their compliance with CCA obligations including collecting and reporting data on performance against targets to EA
- Negotiating with Department for Business, Energy and Industrial Strategy (BEIS) to agree CCA targets for the sector and its participants
- Helping members to manage their Climate Change Agreements and save on energy tax

www.cia.org.uk

CIABATA is the subsidiary company of the Chemical Industries Association, which manages and administers the chemical sector climate change agreement (CCA) with the Department for Business, Energy and Industrial Strategy (BEIS) and the Environment Agency (EA) on behalf of participating members.

2019

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28 March 2019

@ Imperial War Museum North

The Quays, Trafford Wharf Rd, Manchester

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