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MAGAZINE

KICKSTARTING HEALTHCARE CONVERSATIONS

WATCHING OUR WASTE

How pharma can meet expectations when it comes to climate change, carbon emissions and sustainability



Shaping up to new realities in the NHS

Clinical research outsourcing

Predictive modelling and machine learning



Improving waste management in pharmaceutical manufacturing

By Grace Oldham, Head of Business Development, at Axil Integrated Services

Pharmaceutical manufacturers are some of the largest producers of waste around the world. Although the industry is highly regulated, this does not always extend to the management of waste materials, meaning the influence waste has in driving a more sustainable production process is often overlooked. The world of waste management is evolving. For so long, manufacturers were happy for waste companies to simply empty bins and keep waste moving off-site. However, many now understand the value that can be derived from the waste they produce, and manufacturers are beginning to unlock their wastes' potential.

Waste Segregation

Segregation of different laboratory wastes can improve compliance and safety, whilst introducing cost savings. Solvents are the most common waste material and manufacturers strive to recover and recycle these to reduce environmental impact. Although not as simple as other forms of waste segregation, substantial savings can be achieved by separating solvents.

In addition, cost savings can be realised simply through segregating pharmaceutical solids from their packaging. By enabling the outer packaging to be recycled, significant savings and a reduction in carbon footprint can be realised. Many manufacturers are cautious of the auditor, and often waste ends up as hazardous waste when the manufacturer is unsure of its correct classification – this is an expensive fix-all. Through staff engagement, non-hazardous materials can be diverted into general waste, resulting in significant cost and environmental savings.

Flexible hazardous waste storage can allow for capacity to fluctuate between materials, without breaching site regulations or causing unnecessary collections. This provides a flexible working solution to match the peaks and falls of different product wastes across the site.

Turning waste into commodity

Consumers expect the manufacturing process to be carried out in a sustainable way. Pharmaceutical manufacturers have implemented greener processes and adopted waste reduction strategies alongside setting robust recycling targets. However, vast amounts of waste materials continue to be disregarded despite the value they hold.

Solvents, effluents, and branded card and plastic packaging can achieve significant rebates. By changing the way these materials are presented for disposal on-site prior to collection, you can reduce transport costs, cut carbon footprint through reduction in vehicle movements, and turn waste disposal costs into a profitable revenue stream.

Striving for Circularity

Lower grade solvent materials or redundant stocks can also be re-sold as raw materials to industries where a reduced level of purity is acceptable in the manufacturing process to minimise waste and drive circularity. We recently achieved £16,000 income for one of our pharmaceutical manufacturers by selling their waste materials back to market. Previously, this would have cost £7,000 per annum to dispose of via incineration, creating a swing of over £23,000.

There can also be an over-reliance on high temperature incineration as a disposal method for pharmaceutical hazardous waste, but with improved segregation there are 'greener' alternatives such as EfW, autoclave and/or chemical treatment & recovery.

Secure disposal

Brand integrity is of paramount importance and secure disposal is key to ensuring reject products failing stringent quality control measures don't find their way to market. Such events would pose a significant danger to life, in addition to the damage it would cause to brand integrity. Several Pharmaceutical companies manufacture for third parties, and a breach in security of this type could threaten existing contracts damaging the ability to secure future business.

What does good waste management look like?

A good waste management partner will champion continuous improvement across your facilities, with a dedicated contract manager regularly driving innovation and improving processes.

- Reporting – Ensure you understand the ins and outs of waste streams as this is vital to drive change
- Reducing non-conformance – The holy grail is site-based technical support to manage wastes which vary in composition to ensure best-possible outcomes, both commercially and environmentally, and minimise risk to the business
- Access to whole of market – Choose a waste partner with access to the whole market for disposal routes and material rebates.

Total waste management and recycling specialist Axil Integrated Services is urging manufacturers to reassess their waste management strategy and has released a new whitepaper, titled 'At your disposal: Getting waste to work harder for your business'.

To download the whitepaper, visit axil-is.com/waste-management-whitepaper/

Grace Oldham is Head of Business Development, at Axil Integrated Services

Watching our waste

By John Pinching

By-products have always been an occupational hazard within the pharmaceutical industry, but the era of climate change has prompted industry-wide soul-searching, philosophical shifts and impressive waste management solutions

As flash floods and wildfires strike throughout the world, climate change has hit home – in many cases, quite literally. No matter what the motivation of a business, company, industry or individual, if it resides on this great spinning rock and it is controlled by intelligent life, it cannot avoid responsibility or response, for that matter.

Okay that's the profound, existential crisis prologue dealt with.

Now it's time to talk about the challenge which our industry faces and how establishing an equilibrium between the appetite to transform lives with the future of the planet across which those lives are scattered. It's a mind-boggling equation that crosses continents, navigates populations and traverses the complexity of a squillion healthcare considerations. Make no mistake, pharma's ecosystem is the biggest in the known universe, featuring a stunning labyrinth of supply chains, laboratory networks, transport operations and, of course, patient groups. This gargantuan and miraculous global health machine is the product of advancements beyond the wildest dreams of our ancestors and even the fantastically serious looking professors immortalised in oil at the Royal College of Physicians.

Consequently, we are living much longer with each century that passes. Ultimately, it has come at a cost – one which we may not have been able to predict but which we are starting to comprehend. The nature of our business is scientific innovation, manufacturing and distribution. At every stage of these processes waste is inevitable.

Chain reaction

In many ways, waste management has always been a 'background' system – taking care of the unfashionable elements of pharma that people would rather not dwell on. Now, however, individuals and businesses are getting much more interested in how the detritus of pharma is being dealt with and – pivotally – how the processes therein are evolving. Companies now want to espouse their green credentials and meet customer expectations when it comes to climate change, carbon emissions and sustainability.

This brave new world has required a very significant cultural change and a much more symbiotic link between the wizardry of pharma production and the companies that are fundamentally changing in the way waste is processed. In the last decade, these

partnerships have become essential as each intricate cycle within medicine production is placed under greater scrutiny.

Axil Integrated Services is a significant trailblazer when it comes to future-proofing waste management operations, with many of its processes developed through the prism of climate change. And it hasn't just been about getting rid of material responsibly, the company has also been championing the currency of 'waste'; not as something disposable but as a usable, reusable or recyclable commodity.

Grace Oldham is Head of Business Development at Axil and has witnessed climate change climbing the agenda. "The situation has changed the way we deliver our total waste management service to clients," she reflects. "Not only are we looking to provide sustainable, best-value solutions, but demand is increasing, as the market looks to better understand the value of their waste."

New order

The need for balance, efficiency and reducing environmental impact has been further oxygenated by the pandemic and, as a total waste management provider, these issues have a permanent role in the inspiration for, and functionality of, Axil's systems.

"There has been an increasing focus on UK-based manufacturing and the need to tackle climate change as a global issue," says Josephine Dimpleby, Axil's Business Development Manager. "This has been further emphasised by recent global events, as the world's populations have turned to pharmaceutical experts with the expectation of a sustainable solution. These issues around social conscience form the central motivation for delivering services to our customers."

Axil works alongside many prominent pharmaceutical, chemical and life sciences companies across the UK. One fundamental element of its service is to ensure the safe and secure disposal of all waste streams produced and, critically, to ensure conformity.

Grace says: "The 'holy grail' of our total waste management service is to provide site-based technical support to manage wastes – which varies in composition – while minimising risks to the business, people and, ultimately, the environment.

"With climate change firmly on people's minds, the importance of brand protection is also increasingly important to clients. They want

to ensure their waste materials don't end up on the shelf or market stalls or in landfill. This would not only mean danger to life, but also negatively impact their brand integrity. Many pharmaceutical companies, for example, manufacture for third parties and this could damage their ability to win or retain future contracts. The ability to impart trust and an all-encompassing service is pivotal."

Digital watch

It's fair to say that digital and pharma have taken a while to establish a spark. It's been like waiting for a firework display which has been delayed because the only match has fallen down a crack between the past and the future: tradition and futurism. In the last few years, however, digital-pharma has taken off and the atmosphere has been alive with the pyrotechnics of possibility. It's a blaze of glory that has also ignited the imagination of waste management.

Josephine explains: "Our customers make use of our digital portal to track their waste output and destination. The data helps steer decisions around innovation and change, such as adopting new waste handling equipment on-site to reduce collection frequencies and carbon footprint. Customers see the same data we see, with the portal delivering a 360-degree view of the waste across their estate. Data is used to monitor trends and establish if there are more efficient ways of managing waste."

"As many of our pharmaceutical manufacturers have unpredictable waste streams and volumes, we work with multiple transport, treatment and disposal outlets, ensuring we always have the best route available for customers," she adds.

Axil also has a futuristic app designed to anticipate health and safety incidents through enhanced reporting systems. Grace says: "We have a unique H&S app which allows all staff – from operatives on-site to the team of directors – to report any risks or near-misses in real time. Staff are urged to report whenever or wherever they see a potential hazard, witness a 'near-miss' or experience an incident or accident, however large or small.

"Engaging staff in this way makes accidents avoidable and Axil staff pride themselves on putting health and safety above all else. When staff report on the app, senior management receive the alert instantly so have complete visibility of any issues as they arise."

Keeping it real

In an evermore enlightened world, which regards employee perspective as an essential vista, Axil champions individual and overall team health and has a proactive occupational health provider who regularly supports staff.

It has also introduced a 'mental health awareness team' who provide an omnipresent platform on which to discuss any issues, or simply to talk on an informal basis. All members of the business – including senior management – have an open-door policy too. Refreshingly, every conversation starts with, 'how are you?'

It's fair to say that climate change awareness has been a cultural awakening for Axil, prompting era-defining shifts across the business which focus most prominently on the environmental outcome and the well-being of employees.

This modern vibe has been further highlighted by new vehicles being first-in-class for safety and efficiency, helping to minimise idling, reduce emissions and maximise route density. Meticulous analysis of data and innovative forward-thinking helps to meet the goal of carbon neutrality for customers through initiatives such as installing living roofs on customer buildings to promote biodiversity and allowing microclimates to flourish.

With these overarching, zeitgeist-seizing philosophies Axil has enjoyed high staff retention rates, mainly due to the team being completely engaged with an overriding mission which feels like it transcends a mere business or industry and seeks to address global themes which everyone can relate to.

Perhaps this is why Axil's strapline is – 'so much more than just emptying the bins'. It's an understatement which shapes the company's belief that by ecologically and sustainably rebooting the infrastructure of pharma waste, the bigger picture of saving lives can thus be improved across the natural world.

"Staff are on board with this and fundamentally believe we are making a difference every day," enthuses Josephine. "We have developed a real team ethic, from the operatives on our customer sites, through to customer services, sales and marketing. We are all working towards the very same goal."

This cohesive approach has yielded great success for clients in the pharma industry – not just environmentally but economically.

One pharma company saved over £30k through improved efficiencies in transport and the construction of a waste compound on-site, while it also reported a 10% improvement in waste rebates (revenue returning to the client from its valuable waste materials). In addition, it has witnessed a huge 80% reduction in contaminated waste through staff education.

Indeed, the last few years have been a steep learning curve for the whole industry, but for the companies reaching the summit there is a vast panorama of eco-ingenuity and innovation.

And, as Axil is demonstrating, this is a golden opportunity for pharma to prove that saving lives goes hand-in-hand with saving the planet and – needless to say – it's an opportunity our industry must not waste. ▲

