

Company fined after an explosion seriously injured two employees

A company which produces electricity from food waste by anaerobic digestion, has been fined more than £300,000 after an explosion caused two employees to suffer life changing injuries.

The metal tank the two men were working on was projected high into the air before crashing to the ground nine seconds later.

Footage of the blast has been released.

On 20 September 2017, two employees of Bio Dynamic (UK) Limited were using a grinder to cut and replace pipework at the top of an 11-metre high metal tank containing waste slurry. They were not using harnesses. Sparks from the grinder ignited flammable gasses causing the tank to explode.

Footage of the explosion captured by CCTV has now been released.

Tomasz Patek was flung out of the mobile elevating work platform (MEWP) into the air and landed on the ground in the slurry around the tank. He suffered serious injuries to his back, head and torso and was in hospital for two months. His injuries were so severe that he was not able to work for more than two years.

Tomasz suffers from pre and post-traumatic amnesia and has no specific recollection of the events. In a statement, he reveals the psychological scars from the incident; "After the accident, I was unable to recover emotionally.

"I did not realise what had happened and was in deep shock. I could not cope with the pain. I could not accept an accident had happened to me."

Robert Tyrko was thrown into the air and landed back in the basket of the MEWP. Following the incident, Robert's leg was amputated and he remains wheelchair bound as treatment is still ongoing to receive a prosthesis. Also, he sustained a fractured skull and a piece of metal in his elbow that continues to affect his daily life.

In his statement, Robert explains how the explosion has affected his day-to-day life; "This whole situation is having a huge impact on my relationship. I can't help my wife in anything like I used to be able to. Magda is both wife and husband because all my responsibilities fell on her; along with the kids.

"Also my personality is explosive. I lose my patience very quickly. I attended appointments with a psychologist because I had nightmares that I was still having this accident."

A joint investigation by the Health and Safety Executive (HSE) and the

Environment Agency found that the company had failed to ensure the health and safety of its employees and others nearby. The company had kept and treated waste in a manner likely to cause pollution to the environment. The explosion was caused by multiple failures in the company's management system and exacerbated by multiple breaches of the company's environmental permit.

At a hearing at Nottingham Crown Court on 22 November 2024, Bio Dynamic (UK) Limited, of Colwick Industrial Estate, Nottingham:

- pleaded guilty to breaching Section 2(1) and Section 3(1) of the Health and Safety at Work etc. Act 1974.
- pleaded guilty to breaching regulation 38(2) of the Environmental Permitting (England & Wales) Regulations 2016 (EPR), and s.33(1)(c) of the Environmental Protection Act 1990 (EPA).
- They were fined a total of £304,500 and ordered to pay £228,998 in costs.

After the hearing, HSE inspector Richenda Dixon said: "It's remarkable that Robert and Tomasz weren't killed.

"This incident resulted from fundamental and multiple failings by the company to properly manage its health and safety risks.

"These included failing to ensure that the design, installation and use of the tanks were safe; failing to carry out risk assessments; failing to put in place a safe system of work; and failing to train and supervise employees."

Senior Environmental Crime Officer Iain Regan said: "This was a lengthy and technically complex investigation by the Environment Agency and the HSE during which we found that the company's attitude towards environmental compliance was largely cosmetic. Although the site had an environmental permit, the company was not complying with the conditions of the permit or with their own management system and procedures.

"The site had unauthorised gaseous emissions points and undertook modifications to their process which were not risk assessed or notified to the Environment Agency. The company did not recognise or understand the impact that these changes had on the safety of the plant and failed to take action, when warned, which could have prevented the incident. These factors, and a failure to implement permit to work procedures, including appropriate risk assessment, created all the necessary conditions on 20 September 2017 for the explosion which occurred.

"Sites which receive, treat or dispose of waste must be permitted to ensure that they minimise the risk to the environment or human health. Incidents such as the explosion at Bio Dynamic show why it is essential that such sites strictly comply with all the conditions of their environmental permit and take their environmental responsibilities seriously. The consequences of the company's failure to comply with its environmental permit could have been fatal. As it is, two employees have been left with life changing physical and mental injuries which continue to devastate their lives seven years on from this incident."

Notes to Editors

1. [The Health and Safety Executive](#) (HSE) is Britain's national regulator for workplace health and safety. We are dedicated to protecting people and places, and helping everyone lead safer and healthier lives.
2. More information about the [legislation](#) referred to in this case is available.
3. Further details on the latest [HSE news releases](#) is available.
4. HSE does not pass sentences, set guidelines or collect any fines imposed. Relevant sentencing guidelines must be followed unless the court is satisfied that it would be contrary to the interests of justice to do so. The sentencing guidelines for health and safety offences can be found [here](#).
5. Guidance on anaerobic digestion can be found here: [Disposal and energy recovery \(hse.gov.uk\)](#), [Dangerous Substances And Explosive Atmospheres, L138: Dangerous Substances and Explosive Atmospheres Regulations 2002. Approved Code of Practice and Guidance, L138 \(hse.gov.uk\)](#)
6. The Environment Agency is the principal body in England with responsibility for the regulation of waste management facilities, the investigation of environmental crime and the prosecution of environmental offences.
7. Environment Agency press releases are available on [UK](#).
8. Guidance from the Environment Agency on anaerobic digestion can be found at www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities