

cleaning up Bhopal

Sir,

In response to the letter by David Edwards on "Let's put an end to Bhopal" (*tce* 885 p2), I would like to state that I support his proposal for the site cleanup.

As a chemical engineer I would support the initiative so that the affected site is reclaimed for use by future generations.

I would welcome future communications from IChemE on the subject.

Nasreddin Gholizadeh MICHemE

Surrey, UK

Sir,

I strongly support the call by David Edwards for a concerted effort to support the cleanup of the old Union Carbide site in Bhopal, India. Previous industry-led attempts have met with suspicion and resistance, so it will not be easy. But then, nothing worthwhile ever is.

Fiona Macleod FIChemE

Stockton-on-Tees, UK

Sir,

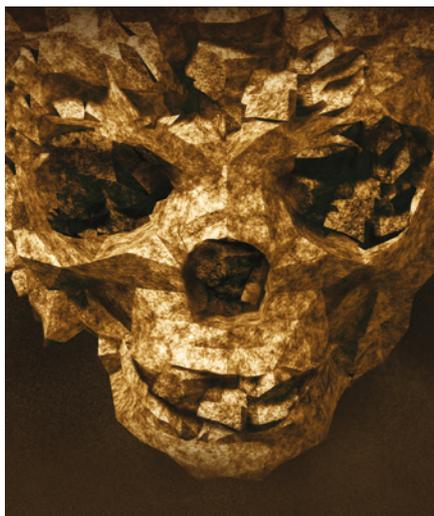
Every resident of Bhopal, and indeed every Indian and human deserves the right to live without the possibility of illness or death from toxic pollution. Today, the world does not devote the resources and political will necessary to ensure that right.

This reality forces us to make difficult choices. To achieve the greatest good with the resources available, we must be pragmatic, and ultimately dispassionate in the prioritisation of our response. Our efforts are best channeled toward the lowest-hanging fruit - achievable projects that create great health benefits at low cost. Unfortunately, our experience shows that the world is full of low-hanging toxic fruit.

There are thousands of sites in India where toxic chemicals threaten human health. The non-profit organization Pure Earth (formerly the Blacksmith Institute) has conducted on-site environmental screenings at hundreds of these sites in India, and thousands more around the world, and has completed 80 pollution cleanup projects. Many of these sites pose severe risks to locals, involve no competing interests, carry no political baggage, and have clear and inexpensive solutions that could be implemented today. Passion may lead us toward Bhopal, but pragmatism may point us elsewhere.

This is not to say that cleanup is not needed at Bhopal, but rather that the threats from toxic pollution should be examined as a whole to ensure that we use the available resources to maximise our impact. If all human life is equally valuable, and if we can prevent illness and death faster and with fewer resources at another contaminated site, we should begin there.

We hope that people with a clear understanding of the situation at Bhopal, and with a passion for that cause, continue



Bhopal has many champions fighting for solutions, but for every Bhopal there are thousands of orphaned toxic hotspots that have no champion, only victims.

to work for solutions there. Bhopal must be clean and safe, just like every schoolyard, neighbourhood and city must be clean and safe. But we encourage readers to also channel that energy toward other, lesser-known sites where a single individual's passion, skill or donation could be enough to clean up a village contaminated with lead in Vietnam, a public beach contaminated with PCBs in Azerbaijan, or a neighborhood park littered with radioactive scrap in Kyrgyzstan. These are examples of real problems, each solved in a matter of months, by a handful of passionate community members and technical advisors, for less than US\$50k.

Bhopal has many champions fighting for solutions, but for every Bhopal there are thousands of orphaned toxic hotspots that have no champion, only victims. Adopt one of these sites. If you or your company want to get involved, contact us.

Andrew McCartor

Program director at Pure Earth

New York, US

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reporting radiation risks

Sir,

I was exasperated by the report "Two die in separate Fukushima incidents" (*tce* 885 p15).

The accidents were tragic, like all fatalities, but were of the sort that can occur in any large-scale industry or construction project.

Letters continued on page 4 >

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MAGAZINE SUBSCRIPTIONS

IChemE publication subscriptions

sales@icheme.org, +44 (0)1788 578214

Annual rate (2015)

Online only (global): £189 (+VAT)

Print & online (UK): £207 (+VAT)

Print & online (RoW): £226 (+VAT)

Single issue price: £20

PUBLISHER

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tce (ISSN 0302-0797) is published monthly (with a combined December/January issue) by the Institution of Chemical Engineers, Davis Building, Railway Terrace, Rugby, Warwickshire, CV21 3HQ, UK. Periodicals postage paid at Rahway, NJ.

US agent: Mercury Airfreight International Ltd,
365 Blair Road, Avenel, New Jersey, 07001.

Postmaster: Address changes to Mercury Airfreight International Ltd,
365 Blair Road, Avenel, New Jersey, 07001.



Printed in the UK by Lock Stock & Printed

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A registered charity in England & Wales
and a charity registered in Scotland
(SC 039661)

ISSN 0302-0797





search wider

Sir,

On reading the article "In-flexible regulations" (*tce* 884 p42) I was surprised to find that the people engaged in research into the unproven links between phthalates and health issues appear to have neglected a large part of the field in which phthalates occur.

All the research and publicity has been concentrated on phthalate plasticisers. There is no mention of the phthalates which have been used in insect repellents and as lubricants for gas turbines and jet engines, or of the glyptal resins in paints and the widely used fibres and films which are polymers of phthalates.

Much research could be applied in these areas, especially because they offer specific groups of workers who are exposed to such phthalates, like painters and aircraft mechanics, ready selected for comparison with control groups.

Surely these other phthalates could not have failed to be demonised through sheer simple ignorance?

Colin Putt FICHEM
Sydney, Australia

They had nothing to do with radioactivity or radiation. Fukushima Daiichi has about 7,000 workers in the cleanup operation and had 55 industrial accidents last year.

It has had two fatalities, both non-nuclear, since the reactor meltdown in 2011. A cursory internet search reveals that the fatality rate in the construction industry in the US was 13 per 100,000 workers in 2001 and the accident and illness rate was 8 per 100 workers. The Fukushima numbers are clearly in line with or better than typical industry averages.

Why single out Fukushima for mentioning these two accidents in isolation - unless it is sensationalism trying to capitalise on the perceived dangers of things nuclear? Such reporting is unworthy of *tce*.

Derek Lister MICHemE
Professor emeritus & research chair,
Nuclear Engineering
University of New Brunswick
Canada

Editor's note

tce carries stories about fatalities from across industrial sectors. For example, the same issue included a report about deaths on a Brazilian FPSO (p18). The Fukushima report was published because it's a strong story. There is certainly no desire to sensationalise the perceived dangers of the nuclear industry. The opposite, in fact. I like to think that *tce* helps redress the balance. We've published a number of articles to this end, but if I could recommend just one it would be the feature published last year titled *Not such a big bad monster* (*tce* 876).

gender bias

Sir,

I read with interest the news that the IET and Prospect have created a working group to help increase the number of women in engineering [reported this issue on p11]. This led me to your online article written by Stan Higgins, CEO of NEPIC, on the need to inspire more women to enter the profession. This coincided with International Women's Day in March. His article illustrates the gender bias in education. There are now more women going to university than men and some subjects such as the history of art have become the exclusive domain of women.

I completely agree that we need more women in engineering but I am also sure the history of art will be suffering (along with a lot of other disciplines) from a lack of men.

Gender bias needs to be removed from all aspects of education and not just in engineering.

Keith Plumb FICHEM
Cheshire, UK

I completely agree that we need more women in engineering but I am also sure the history of art will be suffering (along with a lot of other disciplines) from a lack of men. Gender bias needs to be removed from all aspects of education and not just in engineering.

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