

# ENVIRONMENTAL ENGINEERING DIVISION NEWSLETTER

**23 NOVEMBER 2009**

Please be aware any Newsletter URL ending in **020701.pdf** is available for downloading only during the six days following the date of the edition. If you need previous Newsletter entries contact George at ghh@att.net.

Please Note: This newsletter contains articles that offer differing points of view regarding climate change, energy and other environmental issues. Any opinions expressed in this publication are the responses of the readers alone and do not represent the positions of the Environmental Engineering Division or the ASME.

**George Holliday**

This week's edition includes:

**1) ENVIRONMENT: A. NOTHING OF INTEREST**

**2) SAFETY.A. Crane Collapse**

<http://www.houmatoday.com/article/20091117/ARTICLES/911179907/1211?Title=One-killed-another-injured-after-crane-collapses>

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**3) HEALTH A. Bangladesh mass poisoning mystery solved**

One of the world's great poisoning mysteries may have been solved -- the source of the arsenic that turns up in lethal quantities in hundreds of thousands of wells across Bangladesh. The answer is ponds.

Bangladesh occupies the flood-prone delta of the river Ganges. In the past half-century, villagers have had to dig pits for soil to raise their homes above the floods. Water-filled pits cover roughly a tenth of the delta, and appear to be poisoning the wells Bangladeshis sink for drinking water.

Organic carbon in silt and sewage settles on the bottom of the stagnant ponds and seeps underground, where it is eaten by microbes.

This microbial oxidation releases arsenic already in the delta silt -- it washed down into the delta from the Himalayas over thousands of years. The arsenic dissolves in underground water and is tapped by village wells.

Rebecca Neumann of the Massachusetts Institute of Technology, and colleagues, cracked the problem after 7 years spent plotting the chemistry and underground flows of water beneath villages near Dhaka.

She found that oxidation only occurs beneath the stagnant ponds. In contrast, oxygen-rich rice paddies trap the arsenic in soils at the surface.

### **Future poisoning?**

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As long as Bangladeshis drank surface water they were safe. In the late 1970s the country switched to ground water and since then Neumann estimates arsenic has poisoned 2 million Bangladeshis. Luckily for rice eaters, arsenic in the paddy fields is usually flushed away during the monsoon season.

Neumann's analysis reveals that most of the arsenic in well water today seeped underground from ponds dug about 50 years ago, though pits are still being dug today, which could exacerbate poisoning in future.

However, John McArthur of University College London published a study last year [2008] showing no link between ponds and arsenic across the border in West Bengal. "Ponds may have an effect locally, but in the big picture, they may not be so important," he says. But Neumann recommends Bangladeshis play safe by sinking wells away from ponds.

Journal reference: Nature Geoscience, DOI: 10.1038/NGEO685

(<<http://www.nature.com/ngeo/journal/vaop/ncurrent/abs/ngeo685.html>>)

[Byline: Fred Pearce]

Communicated by:

ProMED-mail

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[For an explanation of what the effects of arsenic are, readers are encouraged to see ProMED-mail post 20080920.2965.

The explanation above for the wide spread arsenic makes some sense, but it seems like it either went unrecognized or unreported for a very long time.

The HealthMap/ProMED-mail interactive map of Bangladesh may be found at <http://healthmap.org/r/00Sn>. - Mod.TG]

#### **4) TRANSPORTATION: NOTHING OF INTEREST**

#### **5) COMMENTS:**

##### **A, Nothing will be accomplished in Copenhagen.**

UN Secretary-General Ban Ki-moon has said world leaders are unlikely to agree on a comprehensive treaty in Copenhagen. He said it was more likely there would only be agreement on principles. UN officials have also recently declared there is no chance of agreeing on all elements of a new legally-binding UN treaty before the end of the year. Even Al Gore said it wouldn't be a disaster if the conference produced only a framework agreement, and not a binding deal.

The admission that no treaty will be signed at Copenhagen marks the failure of the process agreed at a UN meeting in Bali in December 2007, when industrialized countries agreed to deliver a binding climate-change agreement within two years. The delay has angered developing countries, which say they are already suffering from man-made climate change. No matter, Copenhagen will be presented as a great success, like all the other global environmental conferences before: Climate will not be permitted to warm by more than 2 degC. But no plan on how to accomplish this goal.

##### **B. Lawmakers call for changes in permit-distribution plan under climate bill**

Sen. Tom Harkin, D-Iowa, and other key lawmakers called on Senate Democrats to revise the allocation process for carbon permits in the climate bill. They say that utilities that rely heavily on coal need more protection. The current proposal does not distribute permits fairly, the senators added, and this may lead to increased power prices for ratepayers in coal-dependent regions. <http://www.reuters.com/article/environmentNews/idUSTRE5AB5Y220091112> (11/12)

##### **C Climate summit likely will leave pollution caps unresolved**

Leaders at the weekend Asia-Pacific Economic Cooperation meeting were not optimistic that a legal agreement on emissions caps would be reached in December at the U.N. climate summit in Copenhagen. Until caps are set, experts say, energy companies will continue relying on cheaper fuel sources and will be reluctant to invest billions of dollars into alternatives.

[http://online.wsj.com/article/SB125824854430448905.html?mod=dist\\_smartbrief](http://online.wsj.com/article/SB125824854430448905.html?mod=dist_smartbrief) (11/16)

##### **D. Shell stresses need for worldwide cap-and-trade concept**

Region-specific systems designed to curb carbon production should be expanded into an international cap-and-trade program to prompt more companies to reduce emissions, Royal

Dutch Shell said. Such mechanisms are needed in more parts of the globe and should be "linked to each other," said Ranjit Prasad, a Shell executive. Prasad, whose company is among those backing emissions caps, urged sectors not obliged to limit emissions to commit to cutting their carbon output. <http://www.chron.com/dispatch/story.mpl/business/energy/6718615.html> (11/13)

## **E. Plan to reach political deal at Denmark summit gets Obama's support**

President Barack Obama supports a proposal from Danish Prime Minister Lars Lokke Rasmussen to forge a political agreement during climate discussions in Denmark, tackling legally binding measures at a later date, U.S. official Michael Froman said. Leaders think it is "unrealistic" to reach a conclusive deal "between now and when Copenhagen starts in 22 days," he added. <http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE5AE02V20091115> (11/14)

## **F. 11th Annual Electric Power Conference**

Baltimore, MD

May 18-20, 2010

<http://www.electricpowerexpo.com/>

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## **G. George,**

Thanks again for putting together your newsletter. I'm sure you realize that EPA has already made their Endangerment Finding regarding CO<sub>2</sub> - they just haven't published it because they received over 400,000 comments that require some lip service. It wouldn't have mattered whether EPA received 1 comment or 1 billion comments; their decision was made based on political need, not scientific facts, long before the comment period was opened. Could you just imagine the fate of any EPA Administrator who would have the courage to objectively look at the comments and the data and come to any conclusion other than "the debate is over."

I can only hope that there are sufficient legal challenges to EPA's recently proposed Tailoring Rule to delay the imposition of BACT on new or modified sources that emit more than 25,000 metric tons of CO<sub>2</sub> equivalent (mtCO<sub>2</sub>e) because there is no basis for their authority to arbitrarily adjust the 100 and 250 tons/yr thresholds specified in the CAA. If they used the existing emission thresholds in the CAA and required office buildings to obtain Title V

Operating Permits, perhaps more people would understand that the Tailoring Rule brings us one more step to becoming a Third World Country. I'm sure there is strong support for the Tailoring Rule in China.

In its current form, if the Tailoring Rule is promulgated and enforced, anyone who installs a 40 mmBtu/hr boiler would need to consider BACT because the new source would emit 25,000 mtCO<sub>2</sub>e. Let's do the math - BACT is typically \$5,000/ton. Multiplying that by 25,000 tons gives you

\$125 million that you would need to spend on CO<sub>2</sub> controls, or energy reduction at your facility, or any other arbitrary and costly project that EPA deems appropriate as a condition of installing your new boiler.

Of course, EPA could change the \$5,000/ton rule-of-thumb for BACT to some other arbitrary number, but the entire Tailoring Rule program is still a complete waste of time and money for business and government.

When the Chinese Government isn't busy laughing while our economy self-destructs, they are making statements that their increasing CO<sub>2</sub> emissions are really the fault of the U.S. because they have to make so many of our products.

My main concern is that the entire "climate change" discussion is getting worse (more costly) in the face of decreasing global temperatures and decreasing hurricane intensity. Could you imagine what would happen if global temperature actually increased or a major hurricane hit the United States! The insanity in Washington is clearly out of control.

Tom

## **H. EPA Employees Silenced for Criticizing Cap and Trade**

by William La Jeunesse

, FOXNews.com

When Zabel and Williams released a video on the Internet expressing their concerns over the Obama administration's plans to use a cap and trade program to fight climate change, they were told to keep it to themselves.

Laurie Williams and husband Alan Zabel worked as lawyers for the Environmental Protection Agency, EPA, in its San Francisco office for more than 20 years, and they know more about climate change than most politicians. But when the couple released a video on the Internet expressing their concerns over the Obama administration's plans to use cap-and-trade legislation to fight climate change, they were told to keep it to themselves.

Williams and Zabel oppose cap and trade -- a controversial government allowance program in which companies are issued emissions limits, or caps, which they can then trade -- as a means to fight climate change.

On their own time, Williams and Zabel made a video expressing these opinions.

[VIDEO: EPA Employees Speak Out Against Cap and Trade](#)

"Cap-and-trade with offsets provides a false sense of progress and puts money in the pockets of investors," Zabel said in the video. "We think that these restrictions might not be constitutional," he said.

Their bosses in San Francisco approved the effort by Williams and Zabel to release the tape, but after an editorial they wrote appeared in the Washington Post, EPA Director Lisa Jackson ordered the pair to remove the video or face disciplinary action.

Specifically, the administration's chief environmental official did not want Williams or Zabel mentioning their four decades with the EPA -- time spent studying cap and trade.

"The people who understand the problems with the cap and trade with offsets bill are not being heard," Williams told Fox News.

The EPA issued a statement saying it welcomes free expression provided employees adhere to ethics rules. The agency reportedly doesn't object to the content of the video but requires Williams and Zabel to make it clearer that they are speaking for themselves and not the EPA.

But some Republicans on the House Oversight and Government Reform Committee want an investigation into what -- if any -- regulations Zabel and Williams violated.

Critics argue the action contradicts the president's support for open government.

"It's censorship," Jeff Ruch, Public Employees for Environmental Responsibility, told Fox News.

"If the Obama administration believes in transparency it is precisely in these cases they need to prove it."

**I. Obama pushes for climate pact that has "immediate operational effect"**

Discussions on climate change next month in Copenhagen should lead to a pact with "immediate operational effect," even if a legally binding treaty is not feasible, President Barack Obama said. The statement came after a meeting between Obama and Chinese President Hu Jintao, and Obama reported that the countries -- the leading emitters of greenhouse gases in the world -- agreed to take "significant" steps to curb carbon production. The U.N. summit should yield not a partial deal or a political manifesto, "but rather an accord that covers all of the issues in the negotiations," Obama added.

<http://www.reuters.com/article/environmentNews/idUSTRE5AG29S20091117> (11/17)

## **J. Senate to punt on climate bill until spring**

Senate Democratic leaders will delay debate on climate legislation until spring to allow pressing matters such as health care, an overhaul of the financial matters and jobs to be considered first. The move signals a weakening political desire to tackle the environmental issue amid a fragile economy and high unemployment.

[http://online.wsj.com/article/SB125850693443052993.html?mod=dist\\_smartbrief](http://online.wsj.com/article/SB125850693443052993.html?mod=dist_smartbrief) (11/18)

## **K. Environmental Engineering Division Speakers List**

The Environmental Engineering Division announces the development of Environmental Speakers list. The listed speakers agree to participate as invited guests at ASME section meetings. The speaker's out of pocket expenses will be borne by the host ASME meeting Section. Please contact Martin Edelson, [mce1@mac.com](mailto:mce1@mac.com), for speaker reservations. We invite other potential speakers to join the Speakers List by contacting Martin Edelson

[\[mce1@mac.com\]](mailto:mce1@mac.com).

<http://www.eandp-environment.net/Transportation/Transportation020610.pdf>

**Regards  
George**