COOPER OATES AIR CONDITIONING COOLING

TRENDS

COAC NEWSLETTER FOR CONTROLLING INDOOR CLIMATE & ENERGY COSTS Mar/Apr 2011

Radiation Threat Management:

COAC decontaminates information about radiation

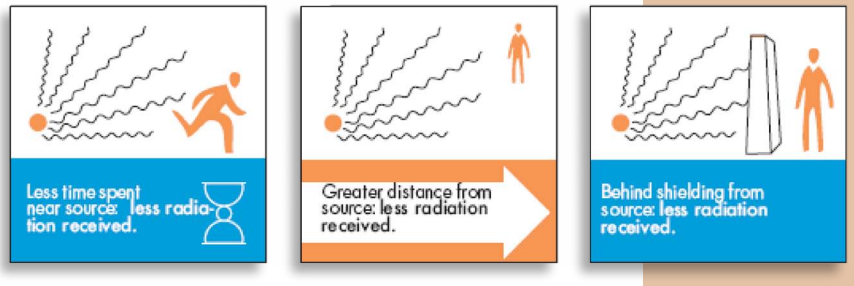
In the past weeks, many of us around the world began thinking seriously about the threat of radioactive fallout from the damaged nuclear reactors at Fukushima, Japan. There are a lot of questions swirling about but the primary question seems to be:

Will radioactive fallout from Japan reach the West Coast in quantities that could increase the risk of cancer for me and my family?

The answer is, "No." By the time any of the radioactive isotopes reach American shores, the fallout will be so diluted that radiation will have dropped well below the levels that cause detectable increases in the risk of cancer. There will not be a reason for Americans to worry about their health. This is according to Kelly Classic, radiation physicist at the Mayo Clinic; Kimberlee Kearfott, health physicist at the University of Michigan; Ralf Sudowe, health physicist at the University of Nevada Las Vegas; Kathryn A. Higley, health physicist at Oregon State University; Jason T. Harris, health physicist at Idaho State University, to name a few.

It will be possible to detect radiation from Fukushima plant in the United States, but only because the tools we have for detecting radiation are incredibly sensitive. We can spot radiation at levels far lower than those that can actually increase our risk of cancer. Frankly, that's a good thing. It means we can see problems before they build into something serious.

If you are still worried and want to know how to minimize your exposure to any form of radiation, the simplest preventions against exposure are time, distance and shielding. Limit the time you are exposed to the radioactive source; increase the distance between you and the source; and shield yourself by placing objects between you and the source. ***Time***, ***distance***, and ***shielding*** measures minimize your exposure to radiation in much the same way as they would to protect you against overexposure to the sun.



Although exposure to ionizing radiation carries a risk, it is impossible to completely avoid exposure. Radiation has always been present in the environment and in our bodies. There are many sources of radiation, both natural and man-made, with some sources having great benefits to us all. In general, the following man-made sources expose the public to radiation:

- **Medical Sources** (by far, the most significant man-made source)
- **Consumer Products** (only trace amounts)
- **Occupations** that individuals are regularly exposed to above average levels of radiation include: Industrial and radiological medical departments, nuclear power plants, research laboratories, and other specialized careers.

The bottom-line of the radiation threat from Japan is that there is no threat. We all receive exponentially more exposure to radiation from natural and man-made sources right here in California than by any fallout from Fukushima.

Additional Links About Radiation:

Video link: AQMD Spokesperson and LA County Health Officer, discuss radiation health risks: http://aqmd.gov/

FAQ's from the Union of Concerned Scientists: http://www.ucsusa.org/nuclear_power/nuclear_power_risk/safety/nuclear-reactor-crisis-faq.html#threat%20to%20west%20coast

World Health Organization (WHO) FAQ's about the Japan nuclear concerns. http://www.who.int/hac/crises/jpn/faqs/en/index.html

Radiation Monitoring facilities in the US: http://cdxnode64.epa.gov/radnet-public/showMap.do

United States Nuclear Regulatory Commission's guide to radiation exposure protection: http://nrc.gov/about-nrc/radiation.html

HVAC Contamination Protocols

In the event of contamination by airborne radiation particles, the recommended HVAC protocols are to:

- Isolate the building occupants from the contaminated air by shutting all air intakes and dedicated ventilation fans to avoid forcing contaminated air into the building.
- Normalize building pressure by turning off exhaust fans to avoid a negative-pressure building which could draw contaminated air into the building.
- Monitor air quality via local and federal regulatory agency recommendations.
- After the airborne contamination has ceased, wash down all outdoor ventilation equipment exposed to the passing contaminates. Replace any filtration media which also may have been exposed.
- Flush the building with uncontaminated outside air for an extended period of time.
- Consult with regulatory agencies for recommended procedures in the event of interior contamination.

Similar methods can also be employed when a building is exposed to other airborne contaminants such as from chemical spills, vehicle or generator exhaust fumes, sewer gas releases, etc.

COAC has implemented both short-term and long-term ventilation strategies to deter these airborne contaminants. If you are interested in implementing strategies to reduce contamination infiltration into your facilities, please contact our HVAC experts at 916.381.4611 or email info@coacair.com.

CUSTOMER KUDOS

"The AirCare Plus™ Program has worked with Cooper Oates Air Conditioning for several years. They have been an excellent participant in providing customers with energy-saving HVAC services. We consider them a collaborative partner in our energy-efficiency program. They are responsive to customers and work hard to satisfy all parties involved."

Emily Pearce
Senior Program Manager – AirCare Plus / PECI

IN THIS ISSUE

IAQ & IEQ

INDOOR AIR & ENVIRONMENTAL QUALITY

Excerpts of articles by Associate Editor Lacey Muszynski – facilitiesnet.com

No one has to tell a facility manager that the consequences of poor indoor air quality (IAQ) can go from bad – complaints about headaches and allergies – to worse, with increased absences and even sick building syndrome. Creating a healthy space for building occupants is one pillar of the sustainability movement. There's good reason for that: When occupants are healthy, they're also usually happy and productive, which translates directly to an organization's bottom line.

Recently, the definition of what creates a healthy space for human beings has been expanding. IAQ has evolved beyond looking only at air quality, in part because many good IAQ steps have become standard practice.

To maintain good IAQ, it's important to keep up on HVAC maintenance.

Indoor environmental quality (IEQ) is the next generation of IAQ. It includes looking at issues such as daylighting, thermal comfort and acoustics.

IAQ BEST PRACTICES

Even if a facility manager is interested in IEQ, the importance of good IAQ cannot be understated. IAQ has a direct effect on the health and well-being of a facility's occupants. Lawrence Berkeley National Laboratories (LBNL) has performed myriad studies on the effects of IAQ and found that worker productivity goes down, student test scores suffer and health problems occur when in a facility with poor IAQ. For example, a pair of studies showed that office worker performance, measured by typing, addition and proofreading tests, improved by about 4 percent when an indoor pollutant source was removed.

To maintain good IAQ, it's important to keep up on HVAC maintenance. HVAC systems play an important role in ensuring good IAQ, but can fail to do so if not properly maintained. Be sure to change filters, clean coils and replace any worn parts on a timely basis. Always inspect for equipment damage, failure or malfunction to keep everything working smoothly.

THERMAL COMFORT

The temperature of a space can have an effect on worker productivity, making it an important part of good IEQ. According to a study by CB Richard Ellis, worker performance increases with temperatures up to 72°F, and decreases when temperatures rise above 73° to 75°F.

Keeping ambient temperatures within that optimal range is important, but all facility managers know that complaints about the temperature will always come, even if they're opposite complaints at exactly the same time. To account for people's varying comfort zones, give occupants a degree of controllability over temperature. That's what research suggests is most important to occupants.

"My door is always open to all employees, but only until my air conditioner is repaired"

Do your part to recycle. Recycle this newsletter by passing it along to a colleague or associate.

OUR THANKS

We are grateful to all of our customers, especially those whose trust we have earned and refer us to others. This month we wish to thank **Janicki Adjusters** for recommending us to Arena Christian Center. Our hard hats off to you!

Would you prefer to receive COAC's Cooling Trends Newsletter via e-mail sign up at: **coacair.com/newsletter.html**

INDUSTRY EVENTS

Not-to-be-Missed Events

- 4/7 – BOMA Stockton Networking Luncheon bomasacramento.org
- 4/18-20 – Green California Summit and Exposition green-technology.org
- 4/20 – IFMA Sacramento Valley Chapter Board Meeting ifmasac.org
- 4/22 – IFMA Annual Golf Tournament at Timber Creek ifmasac.org
- 5/2 – BOMA Education: Design, Operation, & Maintenance of Building Systems, PART II bomasacramento.org
- 5/26 – RECON Networking Event reconnetworking.com

GOOD TO KNOW

The average person spends about 2 years on the phone in a lifetime.

In 1907, air conditioning equipment designed by Frederick Wittenmeier is installed in dining and meeting rooms at Congress Hotel in Chicago. This is one of the first systems designed by Wittenmeier for hotels and movie theaters. His firm, Kroeschell Brothers Ice Machine Company, installs hundreds of cooling plants into the 1930's.

"The way to get things done is not to mind who gets the credit for doing them."
– *Benjamin Jowett*

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