

Indiana IAQ

Issue 3

09/18/2009

About Indiana IAQ:

A new kind of newsletter that addresses the concerns of everyone interested in Indoor Air Quality (IAQ) in Indiana. From the many questions and concerns received this newsletter and the ones to follow are developed from specific concerns. Information is collected and applied this way to the articles published.

Who can write in? *Anyone!* Contractors, mitigation technicians, restoration and remediation technicians, real estate professionals, banks, doctors, lawyers, insurance professionals, investors, anyone with an interest in IAQ.

To submit an idea for an article, write to:

IndianaIAQ@solutionsiec.com.

Inside this issue:

Testing for Silica is Important in the Workplace 2

Health Effects from Exposure to Sewage and Flood 3

Contact Information 4



Preparing for Flu Season: The “Swine Flu” Virus

Flu season is around the corner, and with it new concerns about a new kind of virus—the H1N1, or “swine flu”, virus. First detected in April of this year [2009], this virus quickly became one of major concern. (This became officially evident by the June 11, 2009 pandemic notice from the World Health Organization, or WHO (www.who.int/csr/disease/swineflu/en/index.html)).

Early laboratory studies showed that many of the genes associated with the virus were very similar to influenza in pig (swine) in North America (thus the early name “the swine flu”). But, as studies continued, it was discovered that this virus was very different to that found in

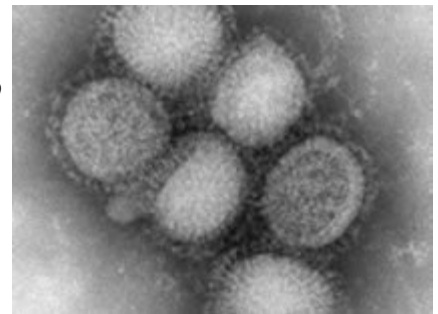
North American pigs. This virus had genes that were similar to European and Asian pig, birds and human strands.

The Center for Disease Control and Prevention (CDC) has determined “that 2009 H1N1 is contagious and is spreading from human to human.”

Yet, despite the fact there have been many reported deaths of infected people, “most people who have become ill with this new virus have recovered without requirement of medical treatment.” (You can read more on the CDC’s studies at www.cdc.gov/h1n1flu/qa.htm).

Here in Indiana there are 273 confirmed cases of this

virus as of July 9, 2009. “Additional cases are likely to occur”, states the Indiana State Department of Health (ISDH). “Human-to-human transmission of this flu oc-



Picture of H1N1 Virus compliments of the CDC.

curs in the same way as seasonal flu occurs in people, which is mainly person-to-person transmission through . . .”

(read more on page 3)

The EPA Responds to Critics of Its Ozone Generating Air Cleaners Policy

In response to our article “Ozone Generating Air Cleaners” (see issue 1, pgs. 3 - 4) a reader responded, “On your article about ozone machines (which is one of the technologies we use), there have been changes made by the EPA as to health levels of

indoor ozone, they raised the level and the efficiency of low levels of ozone, they lowered the level, in Sept 2008.” Not one to want to speak out of line, I interviewed the U.S. Environmental Protection Agency (EPA) regarding their

stance on ozone in the event changes had been made but not reflected on their website. (We had listed a website in that article and wanted make sure that the facts within it remained . . .

(read more on page 2)

Testing for Silica is Important in the Workplace

The National Institute for Occupational Safety and Health (NIOSH) reports that 1.7 million U.S. workers are exposed to respirable crystalline silica in the workplace.

Crystalline silica is the scientific name for a group of very common minerals composed of silicon and oxygen. The use of the minerals goes back from early civilization all the way to modern times. Exposure to crystalline silica can happen in a number of occupations including construction, masonry, ship building, sandblasting and the mining industries to name a few.

Scientists and health professionals have been aware of the danger of prolonged and repeated exposure to the minerals for many years. The health effects of crystalline silica in-

clude silicosis which is a disabling and non-reversible lung disease that can cause death. Other dangerous health effects include lung cancer, pulmonary tuberculosis and other respiratory diseases.

NIOSH reports that each year more than 250 people die from silicosis and hundreds more are disabled. There is no cure for the disease and it is 100% preventable if exposure is limited and personal protective equipment and proper ventilation is implemented.

According to Occupational Safety & Health Administration (OSHA) and the OSH Act employers are to "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause

death or serious physical harm to his employees."



"It's important that workers and management understand the long term risks posed by crystalline silica and to help educate them about the dangers we have provided a free educational poster available at our website," reported Joe Frasca, Executive Vice President for EMSL Analytical. To learn more about testing for crystalline silica contact EMSL Analytical at (800) 220-3675, visit www.EMSL.com or email info@EMSL.com.

Author: EMSL Analytical, Inc. is a nationwide, full service, analytical testing laboratory network providing Asbestos, Mold, Indoor Air Quality, Microbiological, Environmental, Chemical, Forensic, Materials, Industrial Hygiene and Mechanical Testing services.

EPA Responds to Critics

(CONTINUED FROM PAGE 1)

... the same in regards to the EPA's stance on ozone generating air cleaners.)

The direct response to our questioning was, "We still maintain the same information on ozone. It is a pollutant that damages lung tissues. Especially sensitive people like the elderly and children are affected by any level of ozone."

"The website that you are referring to [in our first article on this subject - www.epa.gov/iaq/pubs/ozonegen.html#how%20is%20ozone%20harmful] was released 8 - 10 years ago and is being revised now. The revision is planned to be released around December [2009]. But, our stance is still the same - ozone is not good. Any level is critical."

During our interview several things were mentioned in relation to ozone's health effects. In order not to repeat ourselves I will just report some of the new information and reports coming out that were shared with us: "There are always Volatile Organic Compounds [VOCs] indoors. Small amounts of ozone react with VOCs in homes and create byproducts. Some of these create very fine parti-

cles that are released into the air and are very dangerous. These particles are hard to filter out."

There is also new research that states that ozone reacts with human skin and body byproducts. "Ozone reacts with oils on our skin and produces other byproducts causing allergy, rashes, swelling and irritation." "Studies are still in progress on the health effects of this reaction."

When asked where the EPA recommends interested persons should go to educate themselves on ozone generating air cleaners, they suggest the previously mentioned webpage (www.epa.gov/iaq/pubs/ozonegen.html#how%20is%20ozone%20harmful), the 9th International Conference & Exhibition on Healthy Buildings (www.hb2009.org/home), and a new program geared at educating the public and contractors. "New EPA program on indoor air classes is

on www.epa.gov/iaq... [It is geared to raise] awareness to builders so they can build more environmentally friendly homes."

"Still maintain the same information on ozone... pollutant damages lung tissues."

"A lot of consumers say that they are cleaning the air. That is not true. The source [of pollution] is still there."

With that said about household ozone generating devices, what about the ones used professionally during restoration?

Many in favor of its use on these projects state the inefficacies with biocides killing unwanted microorganisms (see our article Biocide Usage on Mold in Issue 2) justify ozone usage in place of biocides. Those in favor explain that the efficacy of biocides against "biofilms" (this is a polysaccharide adhesive matrix that protects most bacteria and many fungi from outside influences) is something inconsistent. In most cases traditional surface cleaning with these biocides do not remove the biofilm, leaving a surface contaminated. (read more on page 4)

The “Swine Flu” Virus

(CONTINUED FROM PAGE 1)

“. . .coughing or sneezing of people infected with the influenza virus. People may become infected by touching something with flu viruses on it and then touching their mouth or nose.” (For more on the ISDH and the H1N1 virus visit their website at www.in.gov/isdh/24572.htm.)

Symptoms are similar to normal seasonal flu viruses: fever, cough, sore throat, headache and muscle aches. There have been reports of some people having symptoms of runny nose, nausea, vomiting and diarrhea.

“The best way to prevent transmission of flu is to avoid contact with ill individuals and practice good hand hygiene. Stay home and away from others if you become ill.” - ISDH.

This may be easier said than done, as the WHO points out, “You will not be able to tell the difference between seasonal flu and influenza.” Nor may you notice those around you that have this virus.

Recommendations, so far, have included good hygiene and cleaning practices, proper ventilation of suspect and highly populated buildings, as well as specific information for those known to have the illness, such as: “stay at home away from work, school and crowds; rest and take plenty of fluids; cover your nose and mouth when coughing or sneezing and, if using tissues, make sure to dispose of them carefully; [properly] use a mask to help you contain the spread of droplets when you are around others...;

[and,] contact a health professional before traveling to a health facility to discuss whether a medical examination is necessary.” - WHO.

All of these websites have a lot more information, even some for specific “suspect” persons like those pregnant or children under six years of age. For more information do not hesitate to review these resources, making sure to talk to your doctor.

Author: Jason Yost, CIEC, CMRS, WRT, is owner and operator of SOLUTIONS IEC, and has been in the cleaning, restoration, remediation, mitigation, and IAQ industry for over seventeen years. Jason is an individual member of the Indoor Air Quality Association and a board member of the American Indoor Air Quality Council. Visit Jason’s IAQ PRO.FILE at: http://www.iaqa.org/profile_agreement.asp?id=223.

Health Effects from Exposure to Sewage and Flood

Ever since the flooding that took place in the Mid-west United States last year, everyone has been asking me questions like, “What should I have done to...” or “How do you clean up after a ...” or “Can I get sick from being around the [damaged structure] ...” - the list of questions goes on and on. What I thought I would do is briefly discuss and share some resource materials on one of these questions—what are the health effects from exposure to sewage and flood damage?

I will direct you to two resource materials used in writing this article: the Institute of Inspection, Cleaning and Restoration Certification’s (IICRC) S500 “Standard & Reference Guide for Professional Water Damage Restoration” and the Indiana State Department of Health’s (ISDH) website on “Diseases Involving Sewage” (www.in.gov/isdh/22963.htm).

There has been a lot of research gone into the health effects of exposure to contaminated water; for example, in the IICRC S500’s three paragraphs on “Sewage and Health” they’ve listed four

studies of resource for their readers. The reason for all of the research is because there is a real threat to occupant health when exposed to the contamination associated with flood and sewage damage. “Risk to the public’s health from sewage exposure is demonstrated in a 1988-1989 epidemic of hepatitis A in Ocoee, Florida, that resulted in 39 cases and one fetal death (Vonstille et al, 1993).” Unprotected occupants and workers “are at risk for chronic respiratory disease, other systemic health effects, and a host of acute and chronic bacterial, fungal, viral and parasitic diseases.”



Flood damaged shopping center

Why the association of flood and sewage damages? Because during a flood a host of contaminants are brought into the built environment and sewage back-ups are common. During these disasters over “120 different viruses” can be found from the sewage backing up into the built environ-

ment; the water intrusion can “liberate extensive amounts of allergens, as well as potentially infectious agents” from “carpet and other porous materials”; bacterial pathogens can include virulent strains such as “Salmonella, Shigella, and Escherichia coli [E. Coli]”; and can cause diseases such as Campylobacteriosis, Encephalitis, Hepatitis, Poliomyelitis, and many more (see the ISDH website for a list of diseases and definitions).

This is why it is so important to make sure you have your flood or sewage damage inspected and the problem completely defined—so that you can be assured of everyone’s safety and health while assuring that the damage is completely repaired and returned to a safe condition. In fact, the IICRC’s Standard of Care calls for “an independent Indoor Environmental Professional” on these losses for this very reason.

For more information you can visit these websites: www.cdc.gov, www.cal-iaq.org, www.nsc.org/library/facts/airflood.htm.

Author: Jason Yost, CIEC, CMRS, WRT, is owner and operator of SOLUTIONS IEC.



“Don’t let problems with poor indoor air quality take control of your life. Empower yourself with SOLUTIONS—Indoor Environmental Consulting—today!”

(877) 624-7185

We're on the web!
www.SolutionsIEC.com

SOLUTIONS IEC is a truly experienced business that, with over seventeen years of mitigation, restoration, remediation and hygiene practices, can assist you in determining the Category and Condition of the damaged structure; develop a protocol that is real and specific to the structure; and can provide expertise beyond just an inspector’s role. Our staff of professionals have been recognized in both indoor environmental consulting (Council-certified Indoor Environmental Consultants) and microbial remediation supervision (Council-certified Microbial Remediation Supervisors) - two of the most prestigious awards in the industry today! Don’t let poor IAQ take control of your life. Empower yourself with SOLUTIONS—Indoor Environmental Consulting—today!

Serving the Indiana and Illinois states!



EPA Responds to Critics

(CONTINUED FROM PAGE 2)

Again, the EPA responds, *“We still maintain the same information on ozone. It is a pollutant that damages lung tissues. Especially sensitive people like the elderly and children are affected by any level of ozone.”*

Regardless your stance on this subject, because little is known about the chemical by-products left behind, care should always be given to their use. Conditions should always be controlled to sufficiently assure that no person or pet becomes exposed. *“Ozone can adversely affect indoor plants, and damage materials such as rubber, electrical wire coatings, and fabrics and art work containing susceptible dyes and pigments.”*

When concerned with removing an indoor air pollutant, the EPA recommends three steps:

1. Eliminate or control the source of pollution;
2. Dilute and exhaust pollutants through

outdoor air ventilation; and,

3. Remove pollutants through proven air cleaning methods.

*“Of the three, the first approach -- **source control** -- is the most effective.”* (EPA)

This controversy highlights the need for an unbiased investigator and consultant who can help you understand the needs of restoration and proper adjustments to improving indoor air quality. Today, more than ever, there are tests that can be performed to measure chemical and gaseous ozone and its by-products; there are procedures to remove indoor pollution without the need of harmful chemical products and threats; and, there are peer-reviewed professionals (like SOLUTIONS—Indoor Environmental Consulting) who (without an interest in restoration) can help investigate and consult you from where you are to where you want to be.

Getting to know these professionals before you have a problem can go a long way in preparing yourself for any unplanned problems that may arise.

For those of you in Indiana and Illinois, our information is included above. If you live outside the Indiana and Illinois area and want to learn more from professionals in your area, you can go to the American Council for Accredited Certification at www.acac.org. You will want to identify a Council-certified Indoor Environmentalist (CIE) or Council-certified Indoor Environmental Consultant (CIEC) in your area.

Author: Jason Yost, CIEC, CMRS, WRT, is owner and operator of SOLUTIONS IEC, and has been in the cleaning, restoration, remediation, mitigation, and IAQ industry for over seventeen years. Jason is an individual member of the Indoor Air Quality Association and a board member of the American Indoor Air Quality Council. Visit Jason’s IAQ PRO.FILE at: http://www.iaqa.org/profile_agreement.asp?id=223.