EI ALERT

VOLUME 17 NO. 1 A PUBLICATION OF EI

# PANDEMIC INFLUENZA

## TOO MUCH HYPE OR A SERIOUS THREAT?

Imagine - 30-50% of your employees too sick or unable to report for work, disruptions to your supply chain, telecommunications and power outages, fundamental changes in customer buying patterns – are these doomsday scenarios or real threats to the success of your organization? These and other potential impacts of pandemic influenza are being studied by experts in government, business and academia world-wide, driven by the current concern over the growing presence of avian influenza.

Avian flu (known technically as H5N1) has been spreading in recent years throughout Asia, Europe and Africa, in both domestic and wild birds. As of February 19, 2007, 274 cases of avian flu have been reported in humans worldwide, with 167 deaths. The virus currently is not spreading from human to human, but rather individuals are exposed and sickened by direct contact with infected birds. However, there is a fear that the virus could mutate to allow it to spread effectively between humans. As this is a new viral strain, there is little residual immunity in the population, and were it able to gain the ability to spread in humans, could set off a world wide influenza pandemic.

Some have likened that outcome to the global pandemic that occurred in 1918, also referred to as the "Spanish Flu." During that outbreak, possibly the worst infectious disease outbreak in the history of man in total numbers affected, it is believed that 20 – 40% of the world's population was taken ill. Worldwide, death rates were initially reported at 20 million and more recent studies suggest it may have been as high as 50 million. In the U.S. alone, between 500,000 and 675,000 died. If the Avian flu were to have an impact on the scale of that experienced in 1918, some have predicted that in the U.S. alone, we might see as many as 90 million ill, with 2 million deaths.

The "Implementation Plan for the National Strategy for Pandemic Influenza", published by the Homeland Security Council, offers the following planning assumptions:

- The clinical disease "attack rate" will be 30% in the overall population, and highest in school age children (40%),
- In a severe pandemic, absentee rates attributable to illness, the need to care for a family member, or fear of illness may be as high as 40% during the peak of the outbreak, with lower levels the weeks before and after the peak,
- Multiple waves of illness are likely to occur, with each wave lasting 2-3 months.

Others take a more sanguine view. Donald Henderson, M.D., Resident Fellow at the University of Pittsburgh Medical Center, and Founding Director of the Johns Hopkins Center for Civilian Biodefense Strategies, recently stated that he believed many of the statements regarding avian flu were overblown. He indicated a more realistic absentee rate would be around 15%. He does point out though, that the avian flu virus is "unprecedented" and the case fatality rate to date of 50% is a concern.

## In This Issue



The reality of Avian Flu is that no one can really predict how and when this scenario will play out. However, agreement is almost unanimous that planning efforts can minimize the impact on government, local communities, the healthcare delivery system, and business. The U. S. government has undertaken a massive planning effort to address these concerns, involving numerous departments and agencies in this coordinated effort. Several of the more notable planning documents already released include:

- The Dept. of Health and Human Services Pandemic Influenza Plan (Nov, 2005) http://www.hhs.gov/pandemicflu/plan/
- The Homeland Security Council "National Strategy for Pandemic Influenza" (Nov, 2005), and "Implementation Plan" (May 2006), both of which can be found at: http://www.pandemicflu.gov/plan/tab1.html

The DHHS, Department of Commerce, and the Department of Homeland Security have jointly encouraged businesses to "develop specific plans for the ways that you would protect your employees and maintain operations during a pandemic."

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# OSHA ISSUES NEW RULE ON HEXAVALENT CHROMIUM

The U.S. Department of Labor issued a new final standard addressing occupational exposure to hexavalent chromium, pursuant to a 2003 court order. Hexavalent chromium, also known as Cr(VI), is a natural metal used in a wide variety of industrial activities, including the manufacture of stainless steel, welding, painting, electroplating, and other surface coating processes and wood preserving. OSHA estimates that approximately 558,000 workers are covered by the provisions of this standard.

The major health effects associated with exposure to Cr(VI) include lung cancer, nasal septum ulcerations and perforations, skin ulcerations and allergic and irritant contact dermatitis. EPA and IARC have determined Cr(VI) to be a known human carcinogen.

The new hexavalent chromium standard covers general industry, construction, and shipyard sectors. The standard became effective for employers with 20 or more workers on November 27, 2006, for those with 19 or fewer on May 30, 2007; and requires that feasible engineering controls be implemented no later than May 31, 2010. The new standard lowers OSHA's permissible exposure limit (PEL) for hexavalent chromium from 52 micrograms to 5 micrograms of Cr(VI) per cubic meter of air, as an 8-hour time weighted average. The standard also includes detailed provisions relating to controlling exposure, respiratory protection, protective work clothing and equipment, hygiene areas and practices, medical surveillance, hazard communication and recordkeeping.

Employers covered by the standard are required to conduct an initial assessment of employee exposure levels (monitoring) in order to properly apply various provisions of the standard to their operations. Where necessary, the PEL is to be achieved through engineering and work practice controls to the extent that is technologically feasible.

OSHA includes two exemptions in the new standard. The first is to Cr(VI) exposures arising out of exposures to Portland cement. Studies have shown that the trace quantities of Cr(VI) in Portland cement are not adequate to generate significant exposures to Cr(VI). The second is broader and states that, "where the employer has objective data demonstrating that concentrations below 0.5 ug/$m^3$ are not expected under any foreseeable use, the standard does not apply."

This is a far reaching rule and will affect many employers who, at first glance, may not appear to be covered. However, in addition to the electroplating and chromate production industries, employers as diverse as metal fabricating (stainless steel welding) and power generation (hexavalent chromium in fly ash) will be affected. The specifics can be found in 29 CFR 1910.1026. Take time now to review your operations and assure that any unexpected sources of hexavalent chromium are identified and appropriate steps taken to comply with this comprehensive new OSHA Rule.

*If you need assistance with an operational review to determine applicability of the standard to your operations, or to comply with employee monitoring, training or other requirements, contact Mr. Lindsay Cook, CIH, CSP Senior Vice President, at 800 . 717 . 3472, ext. 246.*

# PROMOTING WELLNESS IN THE WORKPLACE

With insurance premiums skyrocketing and the general health of the U.S. population worsening, companies today need to look at ways to decrease their overall healthcare costs. One way for companies to deal with these increased costs is to promote employee wellness in the workplace by offering wellness programs and encouraging employee participation.

The goal of a workplace wellness program is to improve the health and productivity of the employee population. A successful Wellness Program can provide cost savings for the company in a number of ways, including reduced sick leave and absenteeism rates, reduced disability claims, decreased healthcare utilization, lower insurance costs, fewer work-related accidents, and a decrease in overall health benefit costs.

Wellness programs should be chosen based on data collected about the worker population and should focus on those areas that are major health concerns and would, therefore, be most beneficial to the employees. Some examples for wellness topics include fitness, nutrition, weight control, heart health, stress management, and smoking cessation.

In order to ensure success for your wellness programs, you must promote the programs and motivate the employees to participate by making the programs interesting and fun, as well as educational. Your employees will experience the benefit of improved health and quality of life, which leads to improved employee morale and increased productivity. Develop and promote wellness programs as an important employee benefit today. Your employees and your company will benefit from the rewards.

*For more information on the development and implementation of progressive wellness initiatives at your facility, please contact Ms. Kathy Dobler, RN, COHN at 800 . 717 . 3472, ext. 275.*

# EPA's All Appropriate Inquiry Negotiated Rulemaking Process

In early 2002, President Bush signed the Small Business Liability Relief and Brownfields Revitalization Act. The intent of the Act was to provide certain relief for small businesses from liability under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and to amend CERCLA to, among other purposes, promote the cleanup and use of brownfields, to provide financial assistance for brownfields revitalization, and to enhance State response programs.

The Act further discusses the definition "all appropriate inquiry" to establish that a defendant had no reason to know that a release had occurred to the property prior to purchase, and that the defendant took reasonable steps to stop any continuing releases, prevent future releases, and prevent or limit human or environmental exposure. The Act requires that, within two years of enactment, the Administrator of the EPA shall by regulation, establish standards and practices for the purpose of satisfying the requirement to carry out all appropriate inquiries. The Act allows properties purchased after May 31, 1997 and prior to the establishment of new standards and practices, to utilize the American Society for Testing and Materials (ASTM) document known as 'Standard E1527-97,' entitled "Standard Practice for Environmental Site Assessment: Phase 1" to satisfy all appropriate inquiry.

## Committee Discussions Raise Concerns

As a result of the requirement for regulatory standards and practices, the EPA established a "Negotiated Rulemaking" committee to discuss and determine these standards and practices. In April of 2003, the committee, made up of a diverse group of "stakeholders," began discussions. The committee included representatives from various regulatory bodies, real estate associations, consultants, and environmentalist groups.

As the stakeholder meetings progressed, many requirements were suggested that could have derailed the entire process of typical environmental due diligence. For example, it was suggested that adjoining property owners or representatives must be interviewed during the due diligence process. This would present serious concerns with confidentiality, reliability of information provided by neighbors, and could create extreme complications for the professional completing the investigation.

Another area of concern was the definition of the "environmental professional," who must complete the appropriate inquiry process. Several groups proposed that certain professional designations be required for an individual to qualify. While this may seem reasonable, no professional designations appear to accurately judge the qualifications of an individual to perform the appropriate inquiry process. The experience of the individual performing this process is of utmost importance. Still others involved in the committee suggested that the current ASTM E 1527 standard provided the most logical, reasonable and well developed process for the provision of all appropriate inquiry.

The Stakeholders' committee achieved final and unanimous consensus after months of debate and compromise following EPA's extended public comment period on the draft standards. The draft proposes the process by which persons seeking to qualify for one of the liability defenses to CERCLA must conduct an investigation by an environmental professional to identify conditions indicative of releases or threatened releases of hazardous substances.

## New ASTM Standard Adopted by EPA

The ASTM E I527-05 Standard defines an environmental professional as someone with various combinations of professional certifications, education, and experience. This allows environmental professionals with lower levels of experience and higher levels of education to prepare reports. However, the standard does not require the environmental professional to have any specific professional certifications. The standard then defines "All Appropriate Inquiry." The definition requires that an environmental professional complete the inquiry and that site visits and various sources of information be consulted to assess the potential for releases or threatened releases of hazardous substances, pollutants, contaminants, petroleum and petroleum products, and controlled substances.

Items included in the new ASTM Standard that differ substantially from previous due diligence standards include:

- The qualifications to be considered an environmental professional,
- More stringent requirements for the site interview process,
- A search for environmental cleanup liens,
- A review of engineering and institutional controls within ½ mile of the subject property,
- An opinion of the relationship of the purchase price of the property to the fair market value if the property was not contaminated, and,
- A move from the use of *recognized environmental conditions (RECs)* to a consideration of the "degree of obviousness" of the presence of releases in order to make recommendations for additional assessment.

## Real World Implications

While the changes to the ASTM 1527 Standard and the implementation of "All Appropriate Inquiry" procedures will require the environmental professional to complete a more intensive investigation process, the results will yield stronger protections for a prospective purchaser.

While it appears that revisions to the ASTM 1527 Standard will not substantially derail the current process of real estate due diligence, environmental professionals and the individuals involved in real estate transactions should be aware of the changes and assure that their due diligence process meets the new standards. This will assure that property owners meet the investigative requirements for all appropriate inquiry and qualify for available defenses to CERCLA liability.

*For additional information on Due Diligence and All Appropriate Inquiry, please contact Mr. Alan Grosheider at 800 . 372 . 5859.*

# MOLD CONCERNS MUSHROOMING ON YOU? DON'T FORGET ABOUT ASBESTOS!

Mold concerns are a growing issue throughout schools, commercial office buildings, apartment communities, and residential properties across the country. Most of the concerns are due to the ongoing debate regarding safe exposure levels, training requirements for inspectors and remediation contractors, and overall health effects associated with exposure to mold in the indoor environment. Without laws and regulations in place to help manage these issues, good consumer guidance is absolutely essential to minimize risks related to mold.

The keys to preventing mold-related incidents in buildings begin with proper building design and construction. Building construction practices and building related defects have become one of the major issues contributing to water damage and mold growth in indoor environments. However, once construction is complete, there are also several steps that building owners and property managers may take to prevent mold issues in buildings. These steps include routine visual inspections for signs of water damage and mold growth, routine preventative maintenance to address leaks associated with plumbing systems and the building envelope, controlling indoor relative humidity, and rapidly responding to reports of water damage and conditions that may result in mold growth.

In addition to routine building operations, special remodeling and renovation projects may also result in mold-related incidents. Mold growth concealed in wall cavities and other areas of a facility that are not typically accessible may be disturbed and dispersed if proper containment and decontamination procedures are not followed during the project.

There are several conditions that may require further investigation and assessment to determine if your facility is at risk for a mold-related incident. A few of these conditions include the presence of musty or moldy odors, visible signs of mold growth, active water intrusion (roof and plumbing leaks), and elevated indoor relative humidity.

### Mold Sampling and Testing

Currently, there are no universally accepted standard procedures for sampling mold in the indoor environment. Due to the lack of these procedures, Environmental, Health & Safety (EHS) professionals must take care to ensure their sampling, testing, and analysis is unbiased and reproducible. The species present, the rank order of species, and the total measured concentration in indoor and outdoor samples must be considered when interpreting the results of analytical testing.

### Mold Remediation

Remediation efforts should include measures to protect the remediation workers and building occupants, minimize the potential spread of the contamination, and minimize the impact on business operations. EHS professionals must assess each unique situation to determine the appropriate response or level of remediation. Remediation projects must only be performed by professionals trained and experienced in mold remediation procedures. These procedures include methodologies to contain or isolate remediation areas to prevent contamination and minimize the potential for employee exposure. EHS professionals will provide guidance on removal techniques, transportation, disposal, decontamination, and drying of water-damaged materials. Repairing the defects or correcting the conditions which led to the problem, in conjunction with remediation is a key component of any remediation process.

Additionally, because many mold remediation projects involve the removal of typical building materials that may also contain asbestos (e.g. wallboard, insulation, decorative coatings, and floorings, etc.), it is prudent to determine if these materials contain asbestos prior to developing a mold remediation plan. Otherwise, a mold removal project may turn into a large asbestos abatement and decontamination project. This situation has the potential to expose workers and building occupants to asbestos fibers, result in regulatory violations and significantly disrupt building operations.

OSHA's "Asbestos in Construction" Standard (29 CFR1926.1101), released over a decade ago, has impacted a wide variety of workplaces, such as commercial office buildings and manufacturing plants. The standard includes requirements for the employer to conduct training, identify asbestos containing materials, perform air monitoring, implement work practices to minimize exposure, and communicate hazards associated with asbestos to affected employees. The standard applies to activities involving demolition, asbestos removal, and renovation of existing buildings. The facility owner and the renovation/demolition contractor are responsible for complying with this regulation.

According to the regulation, asbestos management activities are required in buildings known to contain asbestos, as well as in those built prior to 1981. This requirement regulates Asbestos-Containing Materials (ACMs) and materials that are presumed to contain asbestos, "Presumed Asbestos-Containing Material" (PACM). PACM includes materials such as thermal system insulation (TSI), surfacing material, vinyl floor tiles, and floor coverings in buildings constructed prior to 1981.

### Asbestos Inspection, Identification and Notification

Any building undergoing renovation should be inspected before beginning work. Before beginning an abatement project, the owners are required to notify all employers, contractors, and tenants who may be expected to work in, or adjacent to, areas containing ACM or PACM. Contractors bidding on work in areas that contain ACMs must be aware of the presence and potential for disturbing those materials. Abatement contractors must also inform building owners, employees working in the area, and employers or workers in adjacent areas, of the location and quantity of ACM and/or PACM and of required precautions to ensure that airborne asbestos fibers are confined to the work area. Following project completion, abatement contractors must also inform the building owners and employers of final air monitoring results and of the current location and quantity of ACM and/or PACM remaining in the area.

### Asbestos Warning Signs and Labels

The building owner is required to post signs at the entrance to mechanical rooms and other areas that contain thermal insulation (TSI) and surfacing ACM/PACM where employees can be expected to enter. The signs should identify the material present, its location, and work practices needed to ensure that ACM/PACM would not be disturbed. Signs must be posted at an appropriate distance from the area, such that an employee may read the signs and be able to take the necessary protective steps before entering the area marked by the signs.

### Recordkeeping

Records must be maintained (generally for 30 years) of any exposure measurements, bulk sample data and any medical records. Building owners must also comply with regulations such as the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) and specific state requirements. Any person performing asbestos-related activities must have a current license from the appropriate state agency.

*For more information or assistance addressing mold and/or asbestos concerns, please contact Mr. Phil Fincher, CIH, CSP, at 804 . 320 . 9300.*

figure 5a

## OSHA's Top Ten Violations

| Rank | 2006 OSHA Violation |
|---|---|
| 1 | General Requirements for Scaffolding |
| 2 | Fall Protection |
| 3 | Hazard Communication |
| 4 | Respiratory Protection |
| 5 | Lockout/Tagout |
| 6 | Powered Industrial Trucks |
| 7 | Electrical, Wiring Methods, Components |
| 8 | Machine Guarding |
| 9 | Ladders |
| 10 | Electrical Systems Design |

*Pandemic Influenza - Continued from cover*

The CDC has prepared a Business Pandemic Influenza Planning Checklist, also available at (www.pandemicflu.gov) to assist businesses in considering operations in the context of an influenza outbreak. Companies that provide critical infrastructure services, such as power and telecommunications, also have a special responsibility to plan for continued operation in a crisis and should plan accordingly.

Pandemic flu is simply another issue to be factored into the Business Continuity Plan (BCP). However, the unknown nature of the threat, and in particular, the enormous potential impact and external factors are cause for revisiting the planning process. Typically, BCP's address an event with limited geographical impact. In the case of a true pandemic, we may need to consider issues of broader scope, including whether the supply chain will continue to function, availability of essential services, how customer buying patterns might change, and even the potential need to redefine critical business functions.

Whatever your assessment of the potential impact of avian flu, factoring this new risk into your Business Continuity Plan makes good business sense. Develop your own planning assumptions, study the potential impacts and utilize this newest threat to reconsider your BCP from a different perspective to assure that it continues to protect and sustain the enterprise.

*EI physicians and occupational health professionals are available to assist in addressing pandemic influenza risks in your business plan. Services include conducting senior management awareness seminars, identifying and assessing impacts of infectious disease outbreaks on business units, and preparing specific response actions and customized plans for groups as diverse as international travelers, healthcare and manufacturing operations. Contact Mr. Lindsay Cook, CIH, CSP, at 800 . 717 . 3472, extension 246 to discuss ways that EI can assist your organization in addressing this threat.*

## Environmental Health and Safety Hot Topics

### Workplace Safety is Key Issue in Union Organizing, Poll Finds

Workplace safety is the leading factor in a worker's decision to join a union, signifying a possible resurgence in organizing activity. After safety, the top reasons for workers seeking union representation were getting better benefits, obtaining higher wages, and increasing job security. According to Stephen Hirschfeld, Employment Law Alliance CEO and labor attorney, workers believe that "the government doesn't seem all that interested in health and safety issues," and thus are looking to someone else to help. He warned that employers "really need to wake up and understand if they don't take these issues seriously and proactively, they are vulnerable to union activity."

### Scaffolding Tops OSHA's Most Frequently Cited Standard List

More than 9,000 violations of scaffolding safety standards were cited by OSHA in fiscal year 2006, making the scaffolding standard the most frequently cited safety and health standard. The highest penalty proposed by the agency in fiscal year 2005 was a $2,415,000 total fine assessed against BP Products North America for violations at an Oregon, Ohio facility. The other most frequently cited OSHA violations for 2006 are listed in figure 5a.

### Scientists Find Increasing Evidence of Need to Lower OSHA Lead Standard

Increasing scientific evidence is showing that OSHA's lead standard must be lowered to protect workers from both acute and long-term harmful effects. "The lead standards of the Occupational Safety and Health Administration are woefully out of date given the growing evidence of the health effects of lead at exposure levels previously thought to be safe," concludes scientific papers written by more than a dozen scientists. Lead-related problems described in the papers include harmful effects on blood pressure and potential effects on the heart. The lead standard covers millions of workers in jobs such as paint removal, building and bridge renovation, plumbing, and water system repair. The Environmental Protection Agency expects to issue a final rule in 2007 to establish lead-safe work practices and training for workers involved in the renovation and repair of properties with lead-based paint.

### Violence Policies Not Changed After Incidents, Survey Finds

Over 80 percent of workplaces that experienced an incident of workplace violence did not change their workplace violence program or policy afterwards, a survey released by the Bureau of Labor Statistics finds. Nearly 5 % of U.S. private industry business establishments had a violent incident within the 12 months prior to completing the survey.

### Leakage Requirement for Respirators Released Soon, Director Says

A concept requirement for testing total inward leakage of half-mask respirators is scheduled to be released in the near future, according to the Director of the National Personal Protective Technology Laboratory.

### Nanotechnology Status Report

Nanotechnology is a buzzword heard often these days. It can be defined as "the science and engineering of functional systems at the molecular scale." Nanotechnology deals with the use of extremely small particles, typically 1 to 100 nanometers ($10^{-9}$ meter) in diameter, as building blocks and system components. The potential for more broad based nanotechnology applications will come from a better understanding of the unique properties of these ultra small particles. Extensive research is underway in government, university and private laboratories. Expect a continuing stream of news on new applications of this technology, and on new and unique effects of these tiny particles on human health. Stay tuned!

The EI Group (EI) is a full service environmental, health and safety consulting firm dedicated to providing quality, cost-effective consulting, testing and training services to manufacturing, government, finance, insurance, legal, commercial real estate, utilities, education and healthcare facilities. Building on its strong reputation for quality and responsiveness, EI has significantly diversified its services over the past two decades in an effort to become **your single-source environmental, health & safety solution.**

INDUSTRIAL HYGIENE SERVICES - EI provides asbestos and lead-based paint inspection, management and abatement; indoor air quality evaluations, including exposure to biological contaminants such as mold & bacteria; employee exposure monitoring and mitigation, noise and airborne contaminant monitoring, and the evaluation of industrial ventilation and other control systems.

SAFETY TRAINING AND COMPLIANCE - EI offers a broad range of OSHA and EPA regulatory compliance courses for asbestos, lead-based paint, HAZWOPER and fall protection; the development and implementation of written corporate safety programs, construction safety oversight, development of written safety protocol and guidelines, and OSHA mandated training for a broad range of safety programs.

ENVIRONMENTAL CONSULTING AND ENGINEERING - Nationwide phase I and II environmental audits, property condition assessments, soil and ground water assessment / remediation and industrial permitting and compliance in the areas of air, water and hazardous waste management.

ENVIRONMENTAL RISK MANAGEMENT SERVICES - From the development and implementation of comprehensive environmental risk management policy, to periodic outsourcing to meet increasing demands in your workload (such as ordering and review of environmental assessments and the performance of online environmental database searches for subject properties) our professionals can be your single resource for all your environmental risk management requirements.

OCCUPATIONAL HEALTH CONSULTING - Safety evaluations / audits, audiometric and spirometric testing, occupational health support services/contract occupational health nurse placement, pulmonary function and audiometric technician training, hearing conservation, respirator fit testing and bloodborne pathogen compliance training.

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