On November 16, 1989 at 12:25 PM in the East Coldenham Elementary School in the Valley Central School District (CSD), Orange County, the most horrific event one could imagine took place. What started as a normal school day, ended with the death of nine children.

The Valley CSD is located roughly 65 miles north of New York City. It was an ordinary morning at East Coldenham, and yet a system of extraordinary weather was moving rapidly across the State. According to the National Weather Service (NWS), an intense low pressure system with a strong cold front moved from the Great Lakes across the State—and the area of low pressure extended as far south as the Gulf of Mexico.

As early as 7:00 AM a severe thunderstorm watch had been issued by the NWS for 14 counties in central and eastern New York State - a tornado watch was added at 9:37 AM. The system reached eastern New York with 90-100 mph winds as approximately 120 first, second, and third graders sat in the cafeteria eating their lunch at the East Coldenham Elementary School. In an interview with the New York State Police immediately following the incident, Principal Harvey Gregory stated that:

“Today, at about 12:20 PM, I was sitting in my office. I got up and walked into the front main lobby. I then walked into the cafeteria because some of the kids were getting excited because of the wind and the rain….About 10 seconds later, the glass from the outside wall came flying into the room in sheets and went halfway across the cafeteria. I started toward the wall where the glass came from to get the kids out of the room when the entire wall came down into the cafeteria and onto the students.”

Nine of the children who had been eating their lunch in that cafeteria were killed and another nineteen were injured.

According to an account of the incident in the New York Times, “…teachers and other school officials rushed in and began digging in the rubble with their hands and carrying the victims to a makeshift emergency ward set up in the school library.”

The subsequent investigation and report by the New York State Disaster Preparedness Commission (DPC) determined that “…the severe system which hit the school was most likely not a tornado but a strong downburst.” The report further stated that “…the masonry portion of the collapsed wall was structurally flawed by a design error that left it unsupported by lateral or vertical bracing.”

The actions that followed still impact schools across the State. In early 1990, the DPC presented a series of recommendations to the State Board of Regents that included:

All schools should be equipped with a weather radio.

All schools should be equipped with a battery powered AM radio capable of receiving an emergency broadcast system signal.

All schools should have access to a school bus radio system for use in a disaster.

The Board of Regents took these recommendations even further and enacted a regulation that: All public schools had to develop a multihazard emergency plan by October 1, 1990 that included potential responses to natural and man-made events.

(continued on page 2)
An emergency notification and dissemination system was established to ensure that both public and private schools received critical emergency information.

The requirement that schools have a multihazard emergency plan was far ahead of most of the rest of the country. NYSED partnered with the NYS Emergency Management Office and county emergency managers to bring school administrators into the emergency management world. Schools were directed to develop a written plan for school cancellation, early dismissal, evacuation, and sheltering. Furthermore, plans were required to include sites of potential emergencies impacting the school (ie -hazard analysis), appropriate responses to such emergencies, and plans for obtaining assistance from emergency responders. Remember – this was a decade before the horrific event at Columbine.

The requirement for school emergency plans expanded even further in July 2000 with the passage of the New York State Safe Schools Against Violence in Education Act (SAVE). This enhanced the planning process to include many additional requirements including both building-specific and district-wide plans and response teams, as well as procedures for assuring that crisis response, fire and law enforcement officials have access to floor plans, blueprints, and schematics of school facilities and grounds. A considerable effort was made to encourage local emergency responders to meet with and train with school administrators. Most notable was the requirement that school plans define their chain of command in a manner consistent with the incident command system. State Education Law §807-a was also enacted requiring schools to provide copies of schematics and blueprints to local emergency responders to assist them in navigating throughout the building during an emergency.

As we approach 2015, schools must continue to review, test, and update their emergency plans. School violence is in the forefront of what most people now think about with respect to school emergency planning, however we must never forget the nine innocent lives lost on that November day in 1989. To honor their memory, I ask that you invite your local fire, EMS, and law enforcement responders to tour your school facilities and meet with staff to ensure that everyone has a clear understanding of their respective roles during an emergency.

Sources Consulted:

Facilities Planning Staff Change

Engineer Stephen Howe has announced his retirement from the NYSED Office of Facilities Planning effective December 1, 2014.

Stephen is a graduate of Northeastern University in Boston and a long time active member and Vice President of the New York Capital Region—American Society of Plumbing Engineers.

As much as he enjoys the ice and snow in upstate New York, Steve’s decided to relocate to the State of Georgia.

Stephen has been a valuable member of the Facilities Planning team and will truly be missed.
NYSED and the New York State Department of Health (NYSDOH) have been working together to ensure a consistent message is communicated to schools concerning issues related to Ebola. Many questions have been raised by school administrators related to Ebola, cleaning school facilities, and existing Green Cleaning requirements.

According to NYSDOH, “… the Green Cleaning program does not directly address the use of disinfectants, since disinfectant products are registered antimicrobial pesticides, not cleaning products. Cleaning products are not tested for efficacy against any pathogens. If a cleanup was needed to address the unlikely case of body-fluid contamination from a known person under investigation (PUI) of confirmed Ebola case, the cleanup company protocol would include appropriate use of NYS-registered disinfectant products for addressing contamination on hard, non-porous surfaces. In that case, although there are no registered disinfectant products specifically labeled against Ebola virus, the CDC and EPA recommendations are to use a product labeled against non-enveloped viruses such as norovirus that are much harder in the environment than enveloped viruses such as Ebola.”

Detailed guidance on cleaning non-healthcare environments (such as schools), may be found at the following web sites.

Information About Cleanup of Ebola-Infected Blood and Other Body Fluids in Non-Health Care Settings


Guidance for Local Health Departments on Ebola Virus Environmental Cleaning and Disinfection in Non-healthcare and Non-laboratory Settings


Joint NYSDOH—NYSED guidance was previously issued for school health personnel on October 24, 2014. The following is an excerpt from that guidance. The entire document can be accessed at:


The NYSDOH does not expect to see an Ebola case in a school, however they have asked that NYSED review procedures with school health personnel in the highly unlikely event that they come into contact with a person who might be infected with Ebola while at school. At this time, NYSDOH recommends schools take the following measures:

- Review of School Infection Control Practices
- Increase vigilance and note if a student or staff presents to the school nurse with fever, muscle pain, weakness, severe headache, abdominal pain, vomiting, diarrhea, or unexplained bleeding or bruising, the nurse or other school personnel should immediately ask about recent travel to Ebola affected areas. If the student or staff member reports having been in an Ebola affected area within the past 21 days and exhibits signs and symptoms described above, the school nurse should consider the possibility of Ebola and implement appropriate follow up measures.

Finally, a New York State information line has been established to answer questions about Ebola at 1-800-861-2280. The call is free and trained operators are available 24 hours a day, seven days a week. This line is for public health information purposes only. If you require medical attention, call your health care provider or 911 immediately.
The U.S. Department of Education Green Ribbon Schools (ED-GRS) award program recognizes schools which take a comprehensive approach to greening their school. A comprehensive approach incorporates environmental learning with improving environmental and health impacts. NYSED is permitted to nominate up to five pre-K—12 schools or school districts to the ED-GRS. New York State has opted not to participate in the districtwide award. If NYSED nominates more than two schools, at least one school must serve at least a 40 percent disadvantaged population. All schools must be in compliance with federal civil rights laws and all federal, state, and local health and safety standards and regulations.

The U.S. Department of Education selects honorees from those presented by eligible nominating authorities nationwide. Selection is based on documentation of the applicant's high achievement in all three ED-GRS Pillars:

**Pillar I:** Reduce environmental impact and costs;

**Pillar II:** Improve the health and wellness of students and staff; and

**Pillar III:** Provide effective environmental and sustainability education incorporating STEM, civic skills and green career pathways.

The ED-GRS program award is an excellent way to receive positive publicity for your school!

For more information on the ED-GRS, please see:

- [www.nysed.gov/PRESS/GREEN%20RIBBON%20SCHOOLS](http://www.nysed.gov/PRESS/GREEN%20RIBBON%20SCHOOLS)

Please direct questions regarding the New York State Green Ribbon Schools program to:

Rosanne T. Groff, RA, LEED AP BD+C, Sr. Architect  
Email: nysgreenrib@nysed.gov  
Telephone: 518-474-3906.

Statement of CSB Chairperson Rafael Moure-Eraso Warning Against Use of Methanol During Laboratory and Classroom Combustion Demonstrations, in the Wake of Reno, Nevada, Museum Fire

"...a team of CSB investigators deployed to the Terry Lee Wells Discovery Museum (The Discovery) in Reno, Nevada, where a flash fire on September 3 injured children and adults viewing a science demonstration. Nine people – eight of them children – were transported to the hospital for evaluation of burn injuries, and one child with more serious burns was admitted to the hospital for treatment."

"CSB investigators spent two days interviewing witnesses and museum personnel, examining the site, and reviewing relevant documents and safety procedures…..Our investigative team determined that the incident occurred during a "fire tornado" demonstration where salts of different elements were combusted in a dish in the presence of alcohol-soaked cotton balls, while spinning on a lazy Susan-type rotating tray. This produces a tornado-like colored flame that rises in the air. The incident happened during a version where boric acid was to be burned in the presence of a methanol-soaked cotton ball. When the cotton failed to ignite it was realized that it had not been adequately wetted with methanol. More methanol was added to the cotton from a four-liter (one gallon) plastic bottle. Unknown to personnel, the cotton ball was likely continuing to smolder, and it ignited the freshly added methanol and flashed back to the bottle. Burning methanol then sprayed from the bottle toward the nearby audience of adults and children visiting the museum."

"This unfortunate incident is similar to a number of others that have occurred around the country during lab or classroom demonstrations where methanol has been used as a fuel for combustion. In 2006, high school student Calais Weber was severely burned, and others were injured, at an Ohio high school during a similar demonstration of a chemical "rainbow" that involved combusting salts with methanol. Calais' burns were so serious she had to be placed in a medically induced coma and required multiple skin grafts. Calais' ongoing ordeal was described in a poignant video we released in December 2013, called "After the Rainbow." In 2012, more students and a teacher were burned, and some were hospitalized, in a methanol-based experiment at a middle school in Liverpool, New York. Then in 2014, a high school student was severely burned in New York City by a methanol fire during another rainbow experiment gone awry. And there are many other examples."

"Methanol is an essential chemical and an emerging energy resource with a multitude of important industrial and environmental uses. But in the cautionary words of Greg Dolan, CEO of the Methanol Institute, which represents the manufacturing community, “Like gasoline, methanol is a toxic and flammable chemical and should only be handled in appropriate settings, and that would certainly not include museums and classrooms.” Methanol readily emits heavier-than-air flammable vapors and the liquid has a low flash point, meaning it can ignite at room temperature in the presence of an ignition source. This creates an unacceptable risk of flash fire whenever any appreciable quantities of methanol are handled in the open lab or classroom in the presence of pervasive ignition sources, such as open flames, heat sources, or sparks. There is also a significant risk of flashback to any nearby methanol bulk container, as was the case in this last incident in Reno, Nevada."

"Similar concerns have been raised by the Committee on Chemical Safety of the American Chemical Society, which this year called on schools and teachers to immediately end all "rainbow" demonstrations involving methanol or other flammable solvents on open benches. In the words of ACS safety experts, “The ‘Rainbow’ demonstration performed on an open bench using a flammable solvent is a high risk operation.” There are well-known safer alternatives to the rainbow demonstration where no methanol is burned in New York City by a methanol fire during another rainbow experiment gone awry. And there are many other examples."

"There are safer alternative ways to demonstrate the same scientific phenomena, and many teachers are already using them. Any use of methanol or other flammables should be either avoided completely or restricted to minimal amounts, which have been safely dispensed at remote locations. Bulk containers of flammable liquids must never be positioned or handled near viewing audiences, especially when there are potential ignition sources present….safety must be the absolute priority in all such endeavors.”
The New York State Smart Schools Bond Act of 2014 has been approved by New York State voters. This means a "smart schools bond fund" will be established in the amount of $2 billion to fund public school technology, pre-K construction, and security capital projects.

To access funds, the Smart Schools Bond Act stipulates that school districts must submit a Smart Schools Investment Plan to the Smart Schools Review Board for review and approval. The Act further states that “in developing the plan, school districts shall consult with parents, teachers, students, community members, and other stakeholders.”

"Smart Schools Projects" (of which there are four subcategories of projects) will need to be included in the Investment plan to be eligible for a Smart Schools Bond Act Grant. The four project subcategories are (1) pre-k construction or transportable replacement project; (2) community connectivity project; (3) classroom connectivity project; and (4) school safety and technology project. At this point, it is suggested that schools engage community stakeholders to determine the highest priority for bond funds in your community and begin to consider the elements of your Smart Schools Investment Plan. This process should be well documented.

More guidance will be forthcoming with specifics regarding the Investment Plan approval process and how Bond Act funds may be used in conjunction with other capital funds and any additional authorizations required.

Individual school district allocations under the Bond Act can be viewed on their 2014-15 State Aid Projections at: https://stateaid.nysed.gov/output_reports.htm or on the Governor’s web site at: www.governor.ny.gov/smart-schools-ny.

A Preview of the New On-Line Fire Safety System—Step One

This article follows-up on the Preparing for Changes to the NYSED Fire Safety System article in Facilities Planning Newsletter #116.

As noted in the previous article, the 2014-15 school year will serve as a time to transition from the existing paper system to the new on-line system.

The first step in launching the new system will be the verification of data in the existing NYSED fire safety system. Therefore, all school districts (other than New York City) and BOCES will be asked to verify information related to each of the existing buildings in the current fire safety system. This includes the name and address of each building, its primary use, ownership, and the SEDREF institution associated with each building. This data verification process will take place annually.

SEDREF is the State Education Department REference File. SEDDREF maintains vital information for every school district, school building, nonpublic and charter school, and BOCES, including but not limited to, the administrative positions and contact information.

NYSED’s Application Business Portal will be accessed in order to verify the SEDREF data, as well as to enter annual fire inspection data once the on-line fire safety system is up and running.

In public schools, only Superintendents of Schools or BOCES District Superintendents have passwords to access this secure on-line portal (see: http://portal.nysed.gov).

To prepare for this process, it is recommended that you do the following:

- Inform the Office of Facilities Planning of any buildings which have been sold or demolished.
- If there are "discovered" buildings that do not have certificates of occupancy (which poses a significant liability to the district), please initiate the "discovered" building process as soon as possible to rectify that situation. Please see: http://www.p12.nysed.gov/facplan/documents/Newsletter_108_final.pdf (scroll to "discovered" building article).

NOTE: The actual launch date for the new system hasn't been determined, although it is fully anticipated that it will take place during the 2014-15 school year. In the meantime, the current system will remain in effect. More information will follow as the launch date gets closer.
The US EPA recently released *Energy Savings Plus Health: Indoor Air Quality (IAQ) Guidelines for School Building Upgrades*. The intent of the document is to assist school officials protect and improve IAQ in schools during building upgrades, particularly energy efficiency upgrades and building renovations.

The *Guideline* covers 23 specific priority issues and addresses common contaminants associated with building upgrades and critical building systems that affect IAQ. Each topic is organized in three sections:

**Assessment Protocols**: Provides measures to identify potential IAQ concerns in school facilities undergoing building upgrades.

**Minimum Actions**: Critical actions intended to correct deficiencies identified during the assessments, include minimum IAQ protections, and ensure that work does not cause or worsen IAQ or safety problems for occupants or workers (i.e., “Do No Harm”). Some of the Minimum Actions identified overlap with regulatory requirements but not all regulatory requirements are listed; others are recommendations for additional steps to protect and improve IAQ during building upgrades. Applicable regulatory requirements must be followed and the regulations, not the summaries in this Guide, establish the applicable requirements. Recommended steps are not mandatory.

**Expanded Actions**: Additional actions to promote healthy indoor environments that can be taken during building upgrades. The EPA recommends considering these improvements when feasible and sufficient resources exist.

The Assessment Protocols, Minimum Actions and Expanded Actions are designed to incorporate good IAQ practices into a variety of energy efficiency and other building upgrade projects.

To be effective, the recommended protocols and actions should be incorporated into the early stages of the project design. Working as a team, energy managers, facility managers, IAQ coordinators and risk managers can use the guidelines to better understand the interrelationships between energy efficiency and IAQ goals and identify opportunities available during typical energy management tasks to protect and promote healthy indoor environments.

Relevant standards and guidance documents for each priority issue are provided in an abbreviated format. More detailed information can be found in the References section of the document.

**This document can be accessed at:**

www.epa.gov/iaq/schools/energy_savings_plus_health.html


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**NYSED Email Addresses**

NYSED has changed its email system from Groupwise to Microsoft Outlook.

To reflect this change, **effective immediately** the email addresses for all NYSED staff have changed.

The following is an example of this change:

| Old Address: cthurnau@mail.nysed.gov |
| New Address: carl.thurnau@nysed.gov |

NYSED email addresses may be found at the following link: [http://addresses.nysed.gov/](http://addresses.nysed.gov/).

Please make a note of this change.
Spontaneous combustion is a byproduct of spontaneous heating, which occurs when a material increases in temperature without drawing heat from its surroundings. If the material reaches its ignition temperature, spontaneous ignition or combustion occurs. Examples of materials that are prone to spontaneous combustion include: oily rags, hay, and other agricultural products.

This statement from the National Fire Protection Association (NFPA) further states that the spontaneous combustion of oily rags can be prevented by securing rags “that have absorbed oils such as linseed oil or turpentine...in well-covered metal cans and thoroughly dried before collection or transport.”

In February 2010, the West Babylon School District’s South Bay Elementary School (Long Island) was engulfed in flames on the last day of winter break - the cause of the massive fire was found to be spontaneous combustion. Throughout the school break, a contractor sanded, refinished, and painted the school’s gymnasium floor. The investigation found that the contractor’s supplies were improperly and carelessly disposed of which resulted in their spontaneous combustion. Fortunately, a local parochial school had just closed and the students completed the school year in that location. Therefore, and in spite of the tremendous damage, students only missed one day of school due to the fire.

Just recently there was a report of spontaneous combustion in the New Hartford Central School District Junior High School resulting from plastic bags filled with gym floor finish and dust following the screening and scraping of a gymnasium floor. In this case, the fire was quickly discovered and extinguished by the responding fire department.

There are many lessons to be learned from these similar scenarios, including the following:

Attention to housekeeping during any construction project is absolutely critical. Legal requirements associated with housekeeping practices must be taken seriously. OSHA §1926.25 states that “combustible scrap and debris shall be removed at regular intervals during the course of construction. Safe means shall be provided to facilitate such removal.” It further states that “containers shall be provided for the collection and separation of waste, trash, oily and used rags, and other refuse. Containers used for garbage and other oily, flammable, or hazardous wastes, such as caustics, acids, harmful dusts, etc. shall be equipped with covers. Garbage and other waste shall be disposed of at frequent and regular intervals.”

Another lesson that should be considered is the fact that students in West Babylon were able to continue the school year in a neighboring school. While it was fortunate that a private school had recently vacated a building which the school district was able to occupy, this is likely the exception rather than the rule. Even so—there may be circumstances when students need to temporarily relocate to an alternate site due to other types of emergencies or hazards. To prepare for such a scenario, familiarize yourself with various types facilities within your school district or an adjacent school district which could potentially accommodate students in an emergency—long-term and/or short-term. Build relationships with the owners of those sites prior to the emergency, include contingencies in your emergency plans, don’t wait until the emergency has already arrived.
The EPA School Flag Program alerts schools to the local air quality forecast and helps them to take actions to protect student health—especially those with asthma.

The program is very simple. Each day the school raises a flag that corresponds to the cleanliness and/or pollution level in the air. The flag’s color matches the EPA’s Air Quality Index (AQI): green (good), yellow (moderate), orange (unhealthy for sensitive groups), red (unhealthy), and purple (very unhealthy).

There is a sixth color, maroon, used in the EPA’s AQI which indicates hazardous air quality. The sixth color is not included in the school flag program since it is rare and will trigger health warnings of emergency conditions from local media.

The EPA School Flag Program uses the brightly colored flags to help children, parents, school personnel, and the community be aware of daily air conditions. You can find the air quality forecast for your area online at: www.airnow.gov. The flag colors correspond to the colors used in the EPA’s AQI to tell how clean and/or polluted the air is for that day. Each day schools raise a colored flag that corresponds to that day’s local air quality forecast. When the school community is aware of the daily air quality, they can adjust their activities to reduce exposure to air pollution. Regular physical activity—at least 60 minutes each day—promotes health and fitness. The goal of the school flag program is to help children continue to exercise while protecting their health when the air quality is unhealthy. For more information on the EPA School Flag Program, visit:

www.airnow.gov/index.cfm?action=school_flag_program.index

Door Chocks

There are many reasons to use the word “chock.” You may enjoy a certain brand of coffee with the word “chock” in its name, you may “chock” up your success to diligence and dedication, but using door “chocks” in schools are an intentional method to override an existing safety device—namely a fire-rated door.

Regardless of whether a piece of wood from a child’s set of blocks is slid under a door, a piece of wood is cut into the shape of a triangle in the school’s wood shop, or a rubber version is purchased from an office supply store—door chocks are illegal.

In addition to door chocks being illegal, so are other make-shift devices such as bungee cords and straps used for holding a corridor door open.

Therefore, no matter where it is or who put it there, any wedge or other materials placed for the purpose of holding a corridor door open must be removed and not replaced. Door closers are safety devices intended to help protect building occupants during a fire. The installation of a door chock or any other item to override the closer is a willful act to disable a critical safety device.

To further illustrate the critical importance of properly working fire-rated doors, please read the article:

Managing a school facility requires a skilled professional adept at understanding and interpreting a wide variety of requirements. This article addresses issues which school facility directors often need to address. This is a regular feature in the Facilities Planning newsletter.

**True or False?**

State aid can be claimed by a school district for adding a “top coat” to pavement.

**TRUE.**

New York State Education Law §408-b states that “authorities for each public and private school building in the State shall submit the most current plans and specifications for each school building under their responsibility to the fire and law enforcement officials in the city, towns, or village where the school building is located.”

The law further states that goal of the law is to facilitate “quick and easy access to and passage through school buildings should it be necessary for fire or law enforcement reasons.”

**True or False?**

Federal Occupational Safety and Health Act (OSHA) rules apply to public employers in New York State.

**TRUE.**

The NYS Department of Labor Public Employee Safety and Health Bureau (PESH) enforces safety and health standards promulgated under OSHA, as well as several additional State standards, for public employers. PESH covers all public sector employers in NYS including, the State, counties, towns, villages, public authorizes, public school districts, and paid and volunteer fire departments.

A school has received a donation of one of the many types of door safety devices now being marketed. Is it permissible to install these devices on classroom doors?

Door safety devices which intentionally override existing classroom door locksets are not allowed in New York State.

The NYS building code under section 715.4.7.1 - LATCH REQUIRED states that fire doors must be provided with an active latch bolt that will secure the door when it is closed. As the Authority Having Jurisdiction (AHJ) for code compliance, NYSED requires fire rated doors with closers on all spaces of pupil occupancy, including classrooms. This means that the door must always close and latch. These products prevent doors from latching and intentionally violate the code. While violent incidents are a tragedy, they remain extremely rare when compared to fire, which happens every single day in schools. Most fires are not serious, such as the boys room trash can, but we have also lost entire facilities or had significant damage including Cleveland Hill Elementary, Hadley-Luzerne, Greece, and West Babylon.

The reason the code requires doors to latch is because fire pressurizes a facility and the latch prevents doors from opening under pressure, prevents the fire from obtaining additional oxygen, and fuel to continue to grow with the resulting greater destruction. Fire doors in classrooms prevent the products of combustion like smoke and toxic gas from leaving the classroom (after the door closes and latches when people exit) and allows everyone else in the facility the time to safely exit without combating smoke and panic in the corridor. Devices which override existing locksets are intended to remain in place at all times in case of a violent intruder, and it is not reasonable to expect everyone to remove the device on their way out after a fire alarm sounds. There are newer design locksets that lock the outside handle with a push of the button from the inside of the room, thus not exposing the teacher to danger. They even have a red indicator to visually confirm the door is locked. These locksets are recommended and are also latched at all times. In addition, they are eligible for building aid, or can be used with the district SAFE funds on a simple claim form to State Aid.

Questions From the Field:

This section will address an actual question which has been raised by a school facility...