

Welcome to "In the Field"

This summer issue marks my first as Center Director. As you may know, I came to the State after six years with the New York City Department of Health and Mental Hygiene. During that time I came to understand the diversity and complexity of environmental public health issues. I believe our ability to develop and maintain effective surveillance systems, communications, policies and programmatic initiatives and activities depends on good science, adherence to public health principles, as well as commitment and professionalism. It is already clear that at the Center and across the State, these same guiding principles are followed by the many dedicated and passionate people who work in the field of environmental health. I look forward to meeting more of you in the time ahead. Enjoy this issue!



Nathan Graber, M.D., M.P.H., Director
Center for Environmental Health

A, B, C or Excellent, Good, Fair?

Is it your fifth grade report card coming back to haunt you or a new way to check out the cleanliness of your favorite restaurant?

Following the 1998 lead of the County of Los Angeles, the New York City Department of Health and Mental Hygiene, in July of 2010, implemented a system for "letter grading" and classifying food service inspection results. It requires all food service establishments in their five boroughs to prominently post (following appropriate due process) a letter grade of "A," "B," or "C" for potential patrons to see from outside their restaurants. This, in turn, paved the way on June 13, 2011 for the Albany County Legislature to pass Resolution No. 155 for 2011 requiring the Albany County Board of Health and the Health Commissioner to consider a "practicable plan" to amend the Albany County Sanitary Code and require all restaurants in the jurisdiction to post inspection results.

Upgrading the Grading

After much research and discussion with restaurant owners, managers, patrons, and representatives of the New York State Restaurant Association, in early December,

2011 a plan was developed. On July 1, 2012, the "upstate alternative" to letter-grading was launched using the descriptive terms: "Excellent," "Good," and "Fair." Also, (thanks in part to Clinton County Health Department staff who designed a rating system which is used to calculate and post letter grades on their website: (www.clintoncountygov.com/Departments/Health/pdf%20files/FSEInspection.pdf), Albany County converted that rating system into a grid that assists inspectors in the field to simply calculate the earned "grade" from the inspection results. Inspectors are finding this system to be easy to implement, motivational to a degree, and not as controversial as had been anticipated. It will take a full year to perform all initial inspections for the County using the new system and to see the overall results. As of this writing (Valentine's Day 2013) 541 of Albany County's 1,262 restaurants have been inspected.

Between the program's inception and 2014 we will collect data, survey consumers, and restaurant owners, and look at violation statistics to attempt to determine whether this idea has made an appreciable difference.

Food Service Establishment Grades in Albany County as of 2/14/13

1st Inspections			Re-Inspections		
Grade	# of restaurants	% of restaurants	Grade	# of restaurants	% of restaurants
Excellent	467	86.32%	Excellent	31	75.61%
Good	45	8.32%	Good	7	17.07%
Fair	28	5.18%	Fair	3	7.32%
Unsatisfactory	1	0.18%	Unsatisfactory	0	0%
Total since 7/1/12	541			41	

Contributed by Marcia Lenehan, Albany County Department of Health

Protecting Ground Water: 25 Years of the Petroleum Bulk Storage Program

In the fall of 1979, a spill occurred from a buried gas tank at an Exxon station in the City of Cortland. This spill required an extensive amount of cleanup and brought to the public's attention the vulnerability of the aquifer. In response, the Cortland County Health Department (CCHD) began to collect data from other service stations. This was the beginning of the county's Petroleum Bulk Storage program.

While the County was establishing rules for toxic and hazardous substance storage, the NYS Department of Environmental

Conservation (DEC) was also writing new regulations to protect the "waters of the state." These rules were promulgated in December, 1985 to become effective in December, 1986. Cortland County, together with Rockland, Suffolk, and Nassau requested delegation to do the program themselves. The common denominator of these counties was their "Sole Source" aquifers.

Identifying Sites

During 1986, information was gathered from sources, such as City Directories

cont. on p. 4



Joan Guard, as "Ronnie Raindrop" at the Cortland County Drinking Water Festival, has worked for the Cortland Co. HD for 28 years. Joan was instrumental in the development of the County's Petroleum Bulk Storage and Radon programs.

Mercury Spills: The Elemental Public Health Response

Health departments often get calls about mercury spills. An improperly cleaned mercury spill can result in extensive contamination, prolonged exposures to mercury vapor, and significant health concerns. When spills are not initially handled appropriately, the human and economic costs of clean-up can be substantial. Two recent calls illustrate how health, environmental, and medical staff, together with consultants and local officials worked doggedly to respond to these calls. They determined the source and extent of mercury contamination; obtained appropriate medical follow-up and housing for those potentially exposed; and remediated contaminated housing and belongings.

Case 1:

Center for Environmental Health (CEH) staff was alerted by an Occupational and Environmental Health Clinic Network physician about a patient who exhibited classic symptoms of mercury poisoning (e.g., bleeding gums, extreme moodiness, red and peeling skin on hands). An extensive environmental medical history eliminated any routine or unusual mercury exposures, except for a report of a work related mercury spill that had occurred five or six months previously. Initial blood tests confirmed significant mercury body burden. Follow-up urine testing (the appropriate test for a sustained elemental mercury exposure) also indicated high exposure.

The patient's laboratory results were the highest mercury values ever reported to the NYS Heavy Metals Registry. CEH reached out to Westchester County Health Department, and Carlos Torres and Chris Lalak quickly initiated a field investigation at the patient's apartment building (Carlos and Chris are experienced in responding to mercury spills; a 1998 residential mercury spill in Yonkers, Westchester County was the impetus for the development of CEH's 1999 Elemental Mercury Manual). Screening with a real-time mercury vapor analyzer confirmed significant Hg contamination throughout the apartment (i.e., breathing zone levels ranging from 400-928 mcg/m³). Carlos worked tirelessly with DEC Region 3 staff to find alternative housing for the patient and his wife, so that remediation of the contaminated apartment



Belongings unrecoverable after mercury contamination

could begin. Once away from the apartment, the residents' mercury levels declined rapidly. Because of the time that had elapsed since the original workplace spill and the amount of mercury that was probably tracked into the apartment (probably from the clothing and shoes of the patient), the apartment contents had to be bagged and screened for contamination to determine if any items were salvageable. Sadly, nearly all of the belongings were unrecoverable.

Case 2:

Steuben County Public Health received notification from the Corning Hospital Emergency room of a patient with rash on feet from possible mercury exposure. After making inquiries, the County contacted Tom Klaseus (Hornell District Office) and Ralph Van Houten (Western Region) when they suspected a residential mercury spill had occurred in the patient's home. DEC Region 8's contractor was called to the residence and real-time screening for mercury vapor found concentrations ranging from non-detect to 250 mcg/m³. In this case, youngsters had discovered a jar of mercury in an adjacent shed and handled it, spilling some in an upstairs bedroom. Concerns about other locations where the mercury might have been unwittingly carried or tracked brought together DOH Western Regional Office and Steuben County Health Department staff, the local code enforcement officials, and DEC Region 8 staff and their contractor. They reached out to neighbors, schools and the families of those who visited the house to determine if additional buildings or vehicles were contaminated.

Remarkably, the contamination was localized to the one home. The family was relocated while the clean-up progressed. However, there was a large volume of household belongings that was disposed.

If a small amount of mercury spills, following the directions on the DOH web page (see Resource column) can prevent much of the disruption and cost that may be incurred when a spill is ignored, or improperly cleaned. For larger mercury spills, DEC should be contacted. Working together, State and local authorities can resolve the common and unique problems that arise when more extensive mercury spills occur, and work together to achieve indoor air mercury vapor levels below 1 mcg/m³.

Contributed by Pat Fritz, Bureau of Toxic Substance Assessment; Ralph Van Houten, Western Region; Tom Klaseus, Hornell District Office and Carlos Torres, Westchester Co. HD

Remediation of Mercury-contaminated Residential Site in Queens, NY

The U.S. EPA has initiated the remediation of a mercury-contaminated residential area in Ridgewood, Queens, which has been designated a federal Superfund site. The site was first brought to the attention of state and federal authorities by the NYC Department of Health and Mental Hygiene (DOHMH) in August 2011, after a field investigation by the DOHMH Office of Environmental Investigations (OEI) found airborne mercury levels in a home (known as "the cottage") to be well above federal guidance levels (range 9 to 25 ug/m³).

OEI tested the site in response to a complaint received from the home's tenants, who had found an old broken thermometer during renovation work. It was determined that the elevated levels were not the result of a recent spill but more likely from historic contamination. Because of consistently elevated mercury levels, the residents were ordered to vacate the property. OEI did outdoor air sampling and found levels to be low. However, air samples collected a few inches above the ground showed a possible impact to the soil and the owners of the property were ordered to conduct an assessment. Soil contamination was confirmed and additional testing was conducted by DEC in neighboring yards, which also confirmed mercury contamination. OEI also conducted air sampling in the surrounding row houses but did not find any elevated levels.

It was later found that the cottage was used for processing and manufacturing mercury thermometers in the early to mid-1900s. EPA's remediation of the site is ongoing and includes the demolition and disposal of the cottage, its garage, and the testing and measured removal of mercury-contaminated soils from neighboring properties. Following these activities, the impacted areas will be returned to their original conditions to the extent possible.

Contributed by the NYC DOHMH Environmental and Occupational Epidemiology Program

Different Shades of Lead

Sindoor, also known as vermilion, is a traditional powder used for religious purposes in Hinduism and as a symbol of marriage for Hindu women. The orange or red pigment is used on both children and adults. Unfortunately, some sindoor products may contain high levels of lead due to the addition of lead tetroxide, also known as minium or red lead.



The New York City Department of Health and Mental Hygiene

(NYC DOHMH) has seen several lead poisoning cases in children and adults associated with the use of sindoor. Recently, DOHMH received a report of a 2 year old child with a blood lead level (BLL) of 25 ug/dL. During the case investigation, the family stated the child placed sindoor, which they used for religious prayers, in her mouth. Several sindoor products were collected from the family and tested. The lead content in

these samples ranged from 3.2 to 330,000 ppm. Since the family reported purchasing all the sindoor products in NYC, DOHMH visited several local businesses to collect a variety of ceremonial powders, including sindoor. One sindoor product sold for “pooja” or prayers was found to contain 570,000 ppm (57%) lead. Lead content in the remaining products found in stores ranged from below detection limits to 36 ppm. The retailer/wholesaler selling the sindoor for “pooja” was ordered to recall the product from all of its retail outlets and re-label with precautionary messages informing consumers of the product’s lead content and actions to minimize exposure. The wholesaler and its retail outlets were also ordered to post a warning sign cautioning consumers of the hazards associated with lead-containing sindoor. Follow-up inspection more than six weeks later showed a high level of compliance and cooperation.

Sindoor is intended for topical application, to the face or scalp in particular. It is never meant for use in food. None of the NYC DOHMH cases reported using sindoor as a food additive. However, there have been reports of lead poisoning cases associated with sindoor use in food. In 2004, a family

in New Jersey with a 13-month old child was found to have BLLs ranging from 57 to 95 µg/dL after ingesting a sindoor product which contained more than 570,000 ppm (57%) lead. The family reported using sindoor as a food coloring. In 2007, the US Food and Drug Administration issued a consumer alert for the Swad brand of sindoor as it was found to contain high levels of lead and had unclear labeling as to use. Swad sindoor was used by two lead poisoned cases as an ingredient in cooking. Labeling on the product included: "SWAD BEST TASTE IN TOWN SINDOOR" and "FOR RECIPE IDEAS VISIT OUR WEBSITE."

Not all products labeled sindoor contain lead. However, it is difficult to differentiate between products with and without lead. Consequently, DOHMH recommends users of sindoor to be aware that products may contain lead, and to take precautions, including washing hands after handling to avoid potential hand-mouth exposure, never using sindoor in or with food, and whenever possible keeping it away from children. Users of such products are encouraged to speak with their healthcare provider and to obtain blood lead testing.

Contributed by NYC DOHMH Division of Environmental Health

A Treat that was Really a Threat



In September 2012, the Westchester County Health Department’s Childhood Lead Poisoning Prevention Program received notification of a child with a blood lead level of 52 ug/dL. It was so high that alternative housing had to be found for the child, as the Health Department’s inspection revealed there to be significant lead paint violations in the child’s primary address.

In addition to the lead paint violations, which posed the most obvious and immediate hazard to the child, Sanitarian Ernesto Brown, the Assessor on the case, went “outside the box,” looking for other sources of lead that may have augmented the already confirmed presence of lead paint and dust.

Ernesto tested the cup that the child frequently used when drinking hot chocolate. The result of the test was negative for lead.

He took a one minute flush sample of water from the kitchen faucet, and brought it to the County laboratory for analysis.

The Sweet Source

Ernesto then assessed the food that the family regularly consumed and determined that the primary food sources brought from the family’s native Ecuador were corn and bulk chocolate. A sample of each was also brought

to the laboratory for analysis. The results from the lab were illuminating. The water tested well under the “action” level of 15 parts per billion, although the family was instructed to do what Ernesto had done prior to taking his water sample – conduct a 1-minute flush of each faucet prior to usage, first thing each morning.

The results for corn tested “below levels of quantitation,” posing no threat to the child. The results for the chocolate, however, were a different story. It tested at 10.6 mg/kg, or 10.6 ppm. Upon receiving these results, Ernesto immediately called the child’s grandmother, and instructed her not to let the family consume the chocolate until further notice.

Next, Ernesto contacted the NYSDOH and informed them of the child’s situation, and the laboratory results of the chocolate. Of significance to the NYSDOH was the fact that the chocolate came in bulk (not pre-packaged in specific quantities), and with no labeling. Ernesto also informed Central office that he planned to confiscate the rest of the chocolate the next week.

Ernesto further pursued the issue by arranging an on-site interview with the child’s uncles and grandfather. He was able to

determine that:

- The family used the chocolate almost daily, but only after melting it to dip bread into the liquid chocolate.
- The family obtained the chocolate from a friend, who still lives in Ecuador, and goes to the town of Azauguez to purchase it in a supermarket there. The uncles and the grandfather observed that in Ecuador “you find it growing wild, all over.”

The lab results of the chocolate and the various pieces of information obtained from the family were all forwarded to the NYSDOH for purposes of research and further action.

Contributed by Steven Eschweiler, Westchester County Health Department

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Special thanks to our contributors

A Cornwall Curiosity: PROBLEM SOLVED

Regular readers of *In the Field* may recall from the fall 2012 issue, a radon mitigation challenge in a Cornwall-on-Hudson home. After remodeling, radon levels were elevated to 150 pCi/L. Two contractors installed mitigation systems but readings still reached 50 pCi/L during the heating season. Here is the happy ending to the story:

The Bureau of Environmental Radiation Protection's Radon Program, along with Camroden Associates, conducted blower door tests, pressure field extension tests, radon concentration tests, and other diagnostic measurements at the house. Finally, they figured out what was happening and how to fix it. There seemed to be a correlation between the seasonal temperature variations and radon concentrations. When temperatures dropped below 55 degrees Fahrenheit, radon concentrations increased in the house. During summer months, radon concentrations were low.

Through testing, it was determined that there was a stack effect occurring within the large mountain that the home was built upon. The air moving generally upwards through the mountain created a large pressure difference between the ground and the home, ultimately pushing radon into the home. The two existing mitigation systems working via sub-slab depressurization were not enough to overcome this pressure difference and keep radon from entering the home.

A few days of sub-slab diagnostic work showed that by reversing the electric inline fans, thus forcing air under the home, a sub slab "pressurization" was taking place and working to block the entry of radon into the home. A few rounds of radon testing proved it. Radon levels are now consistently below the US EPA's action level of 4.0 pCi/L. The family is planning to get back to normal and enjoy their home knowing that they tested for radon, understood the facts and concerns, and ultimately fixed the problem.

Contributed by Nikolas Webster, Bureau of Environmental Radiation Protection

cont. from p. 1 Protecting Ground Water

starting in 1897, to locate all potential tank sites. These tank sites may have been abandoned or still in operation. Over 278 locations within the City of Cortland were found. In December 1986, Cortland County Health Department (CCHD) was delegated the Petroleum Bulk Storage Program by the DEC.

Using the information gathered in 1986, registration forms were sent out, inspections were made, and a database was developed. In 1987, 207 facilities with 623 tanks were registered with the department. Since then most tanks have been removed or replaced. Many tanks that were upgraded in the 1980s are being upgraded again to current standards. Members of the Environmental Health (EH) Department review plans and observe installations.

Today, there are 96 facilities with 408 tanks. While most tanks in 1987 were underground storage tanks (USTs), today most tanks are above ground storage tanks (ASTs). Today only 91 tanks are underground.

Successful Removal

Since 1985, 889 tanks have been properly abandoned primarily by pulling. Most of the tank removals have been observed by EH staff. The tanks have been removed from nearly every closed service station. While former service stations may be on every corner, the tanks are gone.

Currently, in accordance with the DEC, all facilities are inspected at least once every three years. Facilities over the aquifer protection zones in Cortlandville are inspected annually. Annual registration allows the database to remain current.

The EH Division of the CCHD believes that this program provides a valuable service not only for commercial, industrial, and governmental agencies, but also to homeowners and other members of the community. It is important that the water we drink remains free from any type of fuel, additive, or hydrocarbon.

Contributed by Joan Guard, Cortland County Health Department

PROGRAM NOTES:

Body Art

The Bureau of Community Environmental Health & Food Protection is developing Body Art regulations, making rules that must include: a notice of proposed rule-making in the State Register; written justification for development of the rules; body artist's and other stakeholder's input; impact of the rules on jobs and small business; environmental impact; opportunity for public comment; response to public comment; legal and legislative review and approval; and publication of a notice of adoption of the rules in the State Register when completed. Draft regulations (Subpart 72-2 Body Art) have been shared with local health departments, industry associations, and other interested parties for their comments.

Sun Screen Use at Children's Camps

Consultation between the State Education Department (SED) and Health Department regarding the importance of protecting children from potential overexposure to the sun has resulted in revisions to guidance pertaining to the application of sunscreen by children while at school or summer camp.

The SED guidance was changed to reflect that a medical provider order is no longer required to allow a child to carry and use sunscreen when it is used to protect against overexposure to the sun, the sunscreen is approved by the US Food and Drug Administration (FDA) for over-the-counter use, and the child's parent or guardian provides written permission for the child to carry and use sunscreen. Children's camp operators should review their policies regarding the use of sunscreen and consider revising the health history or other forms to get the necessary parental or guardian authorization to implement this guidance.

In this Issue

Albany Co. Restaurant Inspections

www.albanycounty.com/restaurantinspections/

Cortland Co. Petroleum Bulk Storage

cchd.cortland-co.org/index.php/programs-public/petroleum-bulk-storage

Mercury Spill Cleanup

www.health.ny.gov/environmental/chemicals/hsees/mercury/cleaning_up_a_small_mercury_spill.htm

Lead Poisoning Prevention

www.health.ny.gov/environmental/lead/

Radon Mitigation

www.health.ny.gov/environmental/radiological/radon/mitigation/what_is_mitigation.htm

Body Art

www.health.ny.gov/community/body_art/

Children's Camps

www.health.ny.gov/environmental/outdoors/camps/#regs

New Online or Updated Resources

Fish Consumption Advice for 2013 Season

www.health.ny.gov/fish