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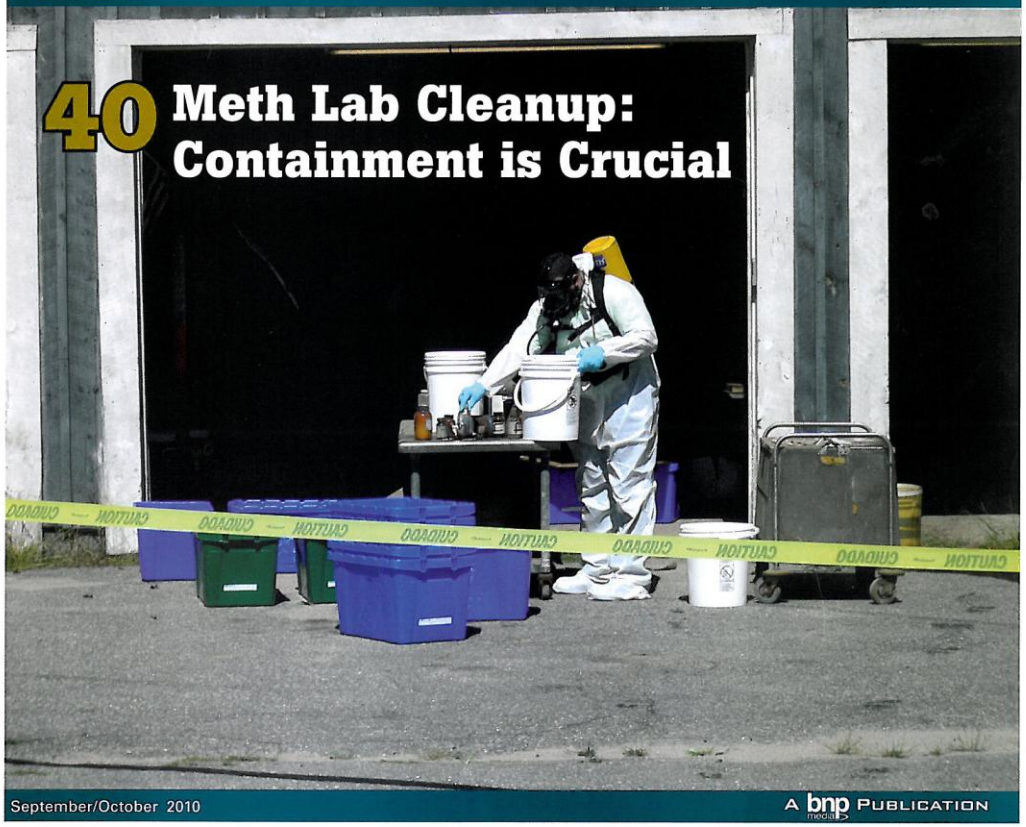

40 Meth Lab Cleanup: Containment is Crucial

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Meth Lab Cleanup: Containment is Crucial

By Geoff Brown

Methamphetamine poses dangers not only to its users, but also to those who clean and restore the locations where it is made. The chemicals needed to produce meth can be found in everyday household cleaners and over-the-counter medicines. It's the process of *cooking* these materials that causes the most danger to those in the building and their neighbors.

In April, federal agents raided the Franklin, NH apartment of two individuals suspected of manufacturing meth. Shortly after the agent's arrival, the suspects' makeshift drug lab exploded, leaving behind a tangle of impacted debris and chemical waste. Drug Enforcement Administration officials contracted ENPRO Services, Inc. to identify and properly dispose of the chemical waste.

ENPRO's LabPack and Chemical Services team arrived and were briefed by the DEA and members of the Franklin Fire Department. The situation was anything but typical: the explosion and subsequent fire had caused significant structural damage and left some building contents wholly unrecognizable.

"During typical clandestine lab cleanups, we meet with DEA officials to strategize and evaluate the site-specific risks," Rob Pelletier, manager of ENPRO's LabPack and Chemical Services Division, said. "In this case, we also had to rely upon the fire department to assess and mitigate the risks created by the explosion and resulting structural damage."

With the support of the fire department, DEA agents and members of Pelletier's team entered the building to assess the chemical impacts. Dressed in protective Tyvek suits, Pelletier and his crew conducted a series of field tests to identify and characterize the residual chemicals and miscellaneous waste containers scattered throughout the apartment. Using a pipette – a laboratory version of an eyedropper – and multiple test tubes, samples of waste substances found were collected and tested for pH, ignitability, and reactivity.

"The chemicals at this site posed particular difficulties," Pelletier said. "Since drug manufacturing was on-going when it was discovered, many of the chemicals were still 'cooking' and reacting. They needed to be stabilized during the identification process."

Field analyses took place within the confines of a secure, staging area behind the home due to the instability of the fire-damaged building. Based on their testing results and knowledge of the chemicals used to make methamphetamine, the ENPRO team containerized the waste and labeled it accordingly.

Pelletier and his crew began the arduous task of segregating each chemical according to the requirements of the DEA as well as the other government entities involved. This meant separating the waste by compatibility, completing a detailed inventory for each segregated grouping, and packaging it into Department of Transportation compliant shippable containers.

About the Author

Geoffrey A. Brown, Ph.D., has worked at ENPRO since 1998. A vice president in the company, Dr. Brown specializes in the assessment and remediation of complex oil and hazardous material release sites. He has more than 20 years of experience in the environmental field, with both environmental consulting/contracting firms and the Massachusetts Department of Environmental Protection. Dr. Brown holds a Ph.D. in Soil Science from Cornell University, an M.S. in Environmental Pollution Control from Penn State University, and a B.S. in Environmental Science from the University of New Hampshire.

"We needed to make sure we were meeting the requirements of the EPA and DOT, as well as DEA secure disposal expectations and contractual obligations" explains Pelletier. "The EPA regulates the identification of hazardous materials, how they are coded and manifested and how they are disposed of. The DOT regulates how the materials are packaged, labeled, and transported. The DEA pays for the disposal, and has specific requirements for secure shipment and storage of the waste. It is our job to find a middle ground in order to work within the confines of all three; this is not always an easy task."

During the segregation process, waste was stored on a temporary spill-containment structure to prevent spills or leaks from impacting the ground surface. Through the field testing and segregation process, the team faced an administrative balancing act. A computer management software program helped ensure the entire process was properly documented and all federally required paperwork was printed accurately onsite.

After the chemical waste and containers were removed from the building, Pelletier's team and the NH Department of Environmental Services entered the building to search for visual signs of residual contamination. This included searching each sink, toilet and bathtub in the apartment for evidence of chemicals being poured down the drain, and searching for the presence of rust-colored stains on the ceiling from boiling off iodine and stray crystals on the ground that form when hydrochloric acid and

rock salt are combined or spilled. In this case, it appeared that the fire had burned any residual chemicals that might have been left behind. In other cases, residual contamination identified on-site has required additional sampling and specialty laboratory analysis and potentially additional decontamination and cleaning activities.

After all site work is complete, regardless of location, time, or how long the job took to complete, the DEA requires that all chemical waste must be transported directly to an approved disposal facility. ENPRO's Transfer Storage and Disposal Facility in Vermont is currently the only facility in the northeast approved by the DEA to accept and store chemical waste from clandestine methamphetamine labs before destruction. On arrival, the waste is received, logged, and secured in the DEA-designated secure storage containers.

"Every DEA site is different and challenging, but this one was particularly challenging due to the physical hazards we faced," Pelletier said. "We were working in and near a building that had suffered severe structural fire damage. Traffic control also played a part as the building was situated on a heavily traveled street on the corner of a large intersection. Every step we took required extra care to ensure the safety of our team. Through constant communication with the fire department, DEA and NHDES, the job was completed efficiently and safely." **R+R**