



NYC Department of Environmental Protection
Bureau of Water & Sewer Operations, Environmental Health & Safety (EHS)

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Environmental Health & Safety News for BWSO



"The Community Right-to-Know program protects the public from the dangers associated with hazardous substances, extremely hazardous substances and regulated toxic substances."
- BWSO EHS Staff



BUREAU OF WATER & SEWER OPERATIONS
ENVIRONMENTAL HEALTH & SAFETY DIVISION

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Do you know your Community Right-to-Know Laws?

Have you ever wondered how many hazardous and toxic chemicals are stored at our facilities, or perhaps at another City Agency? Well, according to the Environmental Protection Agency (EPA) every American has the right to know the chemicals to which they may be exposed in their daily living. Right-to-Know laws provide information about possible chemical exposures.

In 1986, Congress enacted the Emergency Planning and Community Right-to-Know Act (EPCRA) to establish requirements for federal, state and local governments, tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment.

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Generator Knowledge: Identifying Generated Waste

In 2010, thirty six BWSO facilities generated hazardous or non-hazardous wastes. Proper identification and handling of these wastes are key initiatives in protecting the environment and avoiding costly penalties from the Environmental Protection Agency (EPA).

Waste characterization is required for any waste generated. This characterization can be performed by using either "generator knowledge" or laboratory sampling to identify the waste.

"Generator knowledge" means applying what we know about the waste to identify its hazards and regulatory requirements. This can be performed by using the MSDS or previous analysis on the exact same waste. For example, we can use generator knowledge of previous sampling to characterize gasoline debris or lead-based paint chips as hazardous wastes, or generator knowledge based on review... [Continued on Page 2](#)



Did you know...



BWSO assisted with the clean-up of Times Square on New Year's Eve?

[Learn more on Page 3.](#)

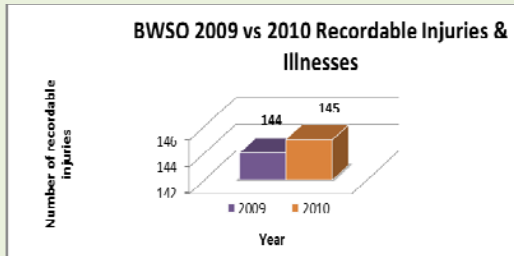


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TAKE QUIZ ON PAGE 4

BWSO Metrics – A Comparison of 2009 and 2010

BWSO Metrics provides an overview of our bureau's performance during the past calendar year by reporting key performance indicators. BWSO EHS analyzes the data from year to year in order to identify trends. Even though comparisons are subject to such external factors as weather (as it impacts injury-related metrics), these metrics offer critical insight into the effectiveness of our programs and areas on which the bureau should focus.

The key areas that we measure include the following: Injuries and Illnesses, Notices of Violations (NOV's) received, Environmental Releases that have occurred, RMP/PSM Releases that have occurred, Environmental Permit Exceedences, and Hazardous Waste Generation. Below is a summary comparing some of our 2009 and 2010 data.



Recordable injuries and illnesses: There were a total of 144 recordable injuries and illnesses in 2009

and 145 recordable injuries and illnesses in 2010—a 1% increase.

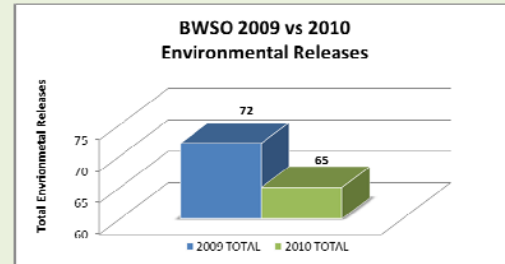
The top three categories for recordable injuries in both 2009 and 2010 are overexertion (strain/sprain), fall or slips, and “struck by” or “injured by.” In order to reduce the number of injuries, EHS plans to conduct injury assessments and provide additional training to facility personnel.



State and local NOV's received: In 2009, BWSO received a total of 19 state and local NOV's and a total of 16 NOV's in 2010—a 19% decrease.

In 2009, 36% of the NOV's received were Department of Transportation (DOT) sidewalk violations, 21% were issued by Public Employee Safety and Health (PEOSH) inspectors for truck mounted crane issues, and 15% were Environmental Control Board (ECB) violations. In 2010, 50% of the NOV's received were Department of Environmental

Conservation (DEC) violations for various issues with our Petroleum Bulk Storage tanks, 25% were Fire Department of New York (FDNY) violations and 18% were Department of Buildings (DOB) elevator violations. The 19% decrease was attributable to the fact that there were no DOT violations and fewer ECB violations issued in 2010.



Environmental releases: A total of 72 environmental releases occurred in 2009 and 65 occurred in 2010—an 11% decrease. Thanks to EHS conducting much deeper root cause analyses and following up on identified issues in 2010, equipment failure numbers have been reduced significantly (47 to 29), and it is directly attributed to the shared goal with Fleet in getting these numbers down.

Due to your hard work and perseverance, BWSO continues to excel in EHS program areas. With all of your help we hope to continue this positive trend to maintain a high level of excellence in EHS.

February 2011

Dear BWSO Colleagues:

With a new year upon us, I am pleased to see our Bureau Environmental Health and Safety newsletter, *The Conduit: EHS News for BWSO*, entering its 5th year of publication. We hope that the newsletter has been and continues to be a source of key EHS information, updates and education. I wanted to use the first edition of 2011 to highlight some of the goals our BWSO EHS office hopes to accomplish in the coming year.

- ❖ Ensure facility arc flash evaluations are completed and improve electrical safety and awareness.
- ❖ Evaluate all existing equipment modifications to prevent accidents and protect employees who work with equipment.
- ❖ Complete the EHS Training Center and provide training that integrates operational skills with applicable EHS standards.
- ❖ Improve recognition of near miss incidents and streamline processes to address them.
- ❖ Improve EHS components of contractor selection and management both within BWSO and across agency bureaus.
- ❖ Move towards the federal model of integrated contingency plans to better manage the requirements of multiple emergency response plans.

In addition to these goals, our office will continue to provide consistent EHS support to all BWSO operations and work towards strengthening our existing EHS programs. Our EHS staff and EHS Safety Officers are available to assist or answer any EHS questions or concerns that you may have. As always, we would like to hear from you. If you have any suggestions, questions or ideas regarding EHS at BWSO you can send them through the EHS suggestion program. And remember with the EHS suggestion program you always have the option of sending your suggestions openly or anonymously.

Thank you all for your continued interest in *The Conduit*, and your dedication to EHS programs at BWSO. On behalf of the entire EHS office, we look forward to working with you in the coming year.

Karen L. Marino
Acting Director, Environmental Health & Safety

Generator Knowledge: Identifying Generated Waste – Continued from Page 1

of the MSDS to characterize spray paint as hazardous waste. While awaiting disposal, these wastes should be managed according to the assumed hazards.

In preparation for shipping, wastes are generally sampled because it is extremely difficult to identify all of the waste characteristics of a product based on generator knowledge alone. As little as 0.00005% of certain chemicals, such as benzene, is enough for a product to be hazardous, rendering generator knowledge a difficult tool to use. Different analyses will be run based on the predicted hazards in a waste. For this reason knowledge of the waste stream and avoiding mixing of different waste streams are extremely important.

Once the lab analysis is reviewed, a waste profile will be created. This document identifies all of the specifics of the waste necessary for proper disposal by the receiving facility including the proper shipping name, hazardous waste codes, known constituents and disposal requirements. At the time of shipment a waste profile for each waste stream must accompany the hazardous waste manifest. Because of the intricacies of the documentation only an individual trained in hazardous waste manifesting by the U.S. Department of Transportation (DOT) is permitted to sign the manifest. If a generator does not

explicitly and accurately describe the waste, there is potential for the receiving facility to make disposal mistakes.

Hazardous wastes are regulated indefinitely after they are generated. Improper waste characterization is one of many actions that can lead to fines and penalties from the EPA. Penalties can be levied on anyone involved in improperly managing the waste, including those who sign the waste profiles and manifests. For this reason it is very important to maintain indefinitely all waste documentation pertaining to waste that is generated at each site. For each job this documentation should include a waste determination (e.g. analytical results), waste profiles, manifests and any other paperwork required for that specific job. These documents can be used to prove that we have correctly identified the waste, accounted for all hazards inherent in the waste, and that the waste has been disposed of in a manner that will protect our environment.



References: DEP's Hazardous Waste Management Policy

Do you know your Community Right-to-Know Laws? – Continued from Page 1

The Community Right-to-Know program protects the public from the dangers associated with hazardous substances, extremely hazardous substances and regulated toxic substances. This program achieves its goal by requiring the owner or the operator of a facility to report hazardous substances, *pure or mixed*, to the Department. It also requires Risk Management Plans to be filed with the Department when extremely hazardous substances or regulated toxics are present at or above federal threshold planning quantities.

Because the program has established fairly low reporting thresholds, many substances, even small quantities, may have to be reported. Every facility will be required to comply with the reporting requirements if the quantity of any hazardous substance meets or exceeds the appropriate reporting threshold. In New York City such reporting can be filed electronically through DEP's online tier II filing system in which the owner or operator fills out their annual Facility Inventory Forms otherwise known as FIF. This filing must be completed on or before March 1st of every year.

Once the report is complete, it is important for the facility to keep a copy of their FIF's for safety as well as inspection purposes. Recordkeeping and tracking the reports will assist facility personnel with updates and annual submissions.

If you have any questions or need assistance with FIF submissions, contact your EHS liaison. For more information on the Community Right-to-Know program or the online tier II filing system, go to <http://www.nyc.gov/html/dep/html/businesses/tier2.shtml>.

Efflorescence: The Cause and Removal

During a recent In-House Audit at Bronx Sewer Maintenance, BWSO EHS staff discovered a mysterious white powder that appeared to be growing from the walls of one of the older brick buildings on the property. Health and Safety personnel took photographs and got to work identifying the substance to ensure that there were no potential health impacts associated with the mystery powder. From their research it was determined that the white powder was efflorescence—a stubborn problem that has caused confusion and trouble



for the masonry industry since its first appearance years ago. Fortunately, the white powder has no known health effects.

What is efflorescence?

Efflorescence can appear on masonry walls after construction, usually about a month after the building is constructed, but sometimes as long as a year after completion. It can be described as a fine powdery substance that exists as a left over deposit on the surface of brick-work or any masonry surface due to the evaporation of water. The evaporation of water will sometimes leave the fine powdery deposits visible on the surfaces because they are composed of water-soluble salts.

- In order for efflorescence to occur, three conditions must be present:
1. There must be a substantial amount of water-soluble salts present within the surface.
 2. There must be enough moisture present within the surface that will distribute the salts into a soluble solution.
 3. A path must exist along with a transporting force (such as gravity or hydrostatic pressure) in order to allow the soluble salt solution to migrate to the surface and lead to the moisture evaporating. Once this occurs the salts are deposited on the surface and crystallize causing efflorescence.

The type of soluble salt that is formed depends entirely on the alkali sulfate that is present within the masonry. For example, Sodium Sulfates (Na_2SO_4) or Potassium Sulfates (K_2SO_4) can be present within the surface. The most common form of efflorescence is Cement Hydration. It is caused by cementitious (having the properties of cement) materials being exposed to water for prolonged periods of time, which in turn produces calcium carbonate efflorescence (CaCO_3).

How to deal with efflorescence?

Efflorescence is not seen as a structural problem, but is considered to be more of an aesthetic or cosmetic concern in the sense that it leaves an undesirable look on brick-work and other hard surfaces. There is no known health effect associated with exposure to efflorescence, and removal is not required or necessary. If removal is desired, the abatement and control of efflorescence is not a complicated task. The first step in the removal process is the identification of the salts of which the surface is composed. If the salts are water soluble then the most reliable method for removal is a dry brush. As an alternative, if the efflorescence is in small patches or limited areas, hand washing with a mild detergent and stiff bristle brush is also efficient. The most common or traditional method of removing efflorescence has been sandblasting. The problem with sandblasting is that it can cause minor structural damage to the brick work and introduce additional health hazards (such as silica) that need to be controlled. Once the efflorescence is removed a sealing agent should be placed on the surface (particularly a waterproof sealing agent) to eliminate the path for the salts to migrate, preventing the efflorescence from returning. Of course, depending on the method of removal, appropriate PPE such as gloves and eye protection must be worn during clean-up activities.

Efflorescence is a controllable condition that should not be a problem in modern masonry. Breaking the chain of conditions necessary for efflorescence can be done by using correct materials and ensuring quality construction.

Reference: www.masonryinstitute.org

Times Square Count Down... The New Year's Eve Clean-Up!



The following men assisted the Department of Sanitation with the New Year's Eve clean-up from 57th Street down to 34th Street on 7th Avenue:

- Charles Polizzano, Joseph Marinelli, Thomas Cozza, Philip Mancino, Chris Creamer, Leo Ciangiulli, Fred Dickerson, Mike Mohan, Hector Gatton, Nathan Schwartz, Thomas Giammarino, Michael Pucciarelli, Chris Dawkins, Mike Meyers, Felipe Chairez, David Zephrene, Eddie Bettis, Tony Robbins, Tyrone Ewell, Charlton Puertas, Joseph Sedita, Joseph Greco, Clinton Spikes, Fred Schneider, James Bruni, Dyanano Maharaj, Scott Lepre and Christopher Devoy.

UPCOMING TRAINING: February – March

1. Facility Specific Right-to-Know
2. Water Plant Operator C.E.U. Course – Leak Detection
3. Universal Waste

Questions? Contact Nelson Leon at (718) 595-5544



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- Monika Niedbala
- John Sloane
- Field Operations—*Bklyn, Bx & S.I.:*
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- Tarek Ahmed
- Annetta Cameron
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We'd love to hear from you!

E-mail us at:

BWSOEHS_suggestions@dep.nyc.gov

John Sloane – EHS Safety Officer, BWSO, EHS



John Sloane joined the DEP in September 2008. He attended Boston College where he majored in Chemistry. John is the EHS Safety Officer for Manhattan Repairs— a facility with 24 hour coverage. As an EHS Safety Officer, he goes out with crews to perform field visits to observe work zone setups, evaluate excavations, and investigate any potential hazards or concerns employees may have. John also assists with audits and performs daily, weekly, and monthly inspections to ensure the facility is in compliance with all federal, state, and local regulations. In addition, John attends EHS trainings and meetings to be informed of pertinent information, and in turn conducts toolbox talks to communicate the EHS information to facility personnel.

Q: Where are you from?

A: I was born in Saratoga Springs, Upstate New York and grew up in Western Massachusetts in the Berkshires.

Q: Where did you attend school and what did you study?

A: I went to Boston College where I majored in Chemistry.

Q: Any hobbies or interests? What do you do in your spare time?

A: I enjoy skiing and reading detective/mystery books preferably English ones.

Q: How did you find out about (or become involved with) Environmental Health & Safety?

A: Actually, my first job out of college I worked for an environmental consulting firm in Mamaroneck— which was my first introduction to the environmental field and I suppose that was when the seed was planted. My company was a consultant to the US EPA when they were first developing the effluent standards for the soap and detergent industry. I would visit various soap and detergent companies and talk to management about their processes, ask what waste they were generating, and sample their discharge.

Q: Prior to working at the DEP where did you work?

A: I worked with the Massachusetts State Police as a Chemist for about 20 years. The lab had four divisions; drug analysis, arson, crime scene investigation and toxicology. I worked with the chemists in the toxicology section where I assisted the Chief Medical Examiner of Massachusetts by analyzing blood and tissues for drugs, alcohol, poisons, etc.

Q: What is your current job title and your responsibilities/role at the DEP?

A: My current job title is EHS Safety Officer. I am the Safety Officer for Manhattan Repairs— a 24 hour facility. I work with management and the laborers to ensure a safe workplace and that the facility is in compliance with local, state, and federal regulations.

Q: What types of EHS duties have you participated in?

A: I go out with crews to perform field visits and to observe that the work zone setups are correct. At times, I get called by a crew to investigate any potential hazards

or concerns they may have. Also during wet connections, I assist with evaluating excavations since our laborers are not the ones who actually dug the excavations. I also attend EHS trainings, audits, and meetings.

Q: What are your qualifications?

A: I have a New York State Asbestos Inspector's license, and like my fellow EHS Safety Officers I've been trained and certified as a Hazardous Waste Site Worker (HAZWOPER) and have taken the OSHA General Industry and Construction Industry safety trainings.

Q: What do you enjoy the most about your current job?

A: I enjoy going to work every day. I enjoy the camaraderie, and the opportunity to apply my knowledge.

Q: What was the most memorable experience you have encountered during a job?

A: I am sometimes awestruck when seeing the infrastructures underneath the city. At times I have to sample the coating on water mains, and some are 72 inches in diameter— I can't stop thinking about what would happen if one broke!

Q: For the two and a half years you have been here, do you feel your role has made a significant difference?

A: All I know is what the people I work with tell me, and from hearing about the recent EHS Employee Survey results— employees today feel as if their safety concerns are being heard by management. According to them, historically that was not always the case and I am happy to be part of that change. I feel a sense of accomplishment knowing that I am helping to ensure they get to go home safe at the end of the day.

Q: Have you achieved/met your career goals and if not, how satisfied are you in your career?

A: I am satisfied in my career. I'm not really sure if I had any goals. I always thought of life as what would happen would happen so I'm satisfied where I am.

Q: What was the best advice given to you?

A: The best advice I recall from my DEP experiences was from Thomas Marrama when he was Superintendent at Manhattan Repairs— He said, "Nobody ever got into trouble by telling the truth."

TAKE THIS QUIZ: SUBMIT CORRECT ANSWERS FOR A CHANCE TO WIN A FREE GIFT CARD

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1. TSDF, a common acronym used in the hazardous waste industry stands for:

- A) Transportation site/ Disposal facility
- B) Toxic substance destination facility
- C) Treatment, stabilization, and disposal facility
- D) Treatment, storage and disposal facility

2. According to Attachment B of the DEP Hazard Communication/ Right to Know Program policy, which is not a Subpart Z air contaminant?

- A) Ozone
- B) Nicotine
- C) Sodium Chloride
- D) All of the above

3. What is the EPA hazardous waste code for corrosives?

- A) D001
- B) D002
- C) D009
- D) COR

Answers for December 2010 Newsletter Quiz: 1) E 2) C 3) C