

Environmental Health & Safety News for BWSO

The Croton Water Filtration Plant Project



Pictures Taken By BWSO EHS Staff

The NYC DEP's primary role in this project is to ultimately guarantee that "high quality water is supplied from the Croton Water Filtration Plant for future generations of New Yorkers."



BUREAU OF WATER & SEWER OPERATIONS
 ENVIRONMENTAL HEALTH & SAFETY DIVISION

DEP is currently in the midst of undertaking one of the largest construction projects in our history – construction of the Croton Water Filtration Plant. How did we get there? Although "the Croton System currently meets all existing health-based water quality regulations, it frequently violates the aesthetic standard for color and taste. Water quality issues have resulted in the Croton System being removed from service on numerous occasions, typically during the summer and fall months in four of the last several years –1992, 1993, 1994 and 1998."

The NYC DEP's primary role in this project is to ultimately guarantee that "high quality water is supplied from the Croton Water Filtration Plant for future generations of New Yorkers." To meet this objective, DEP's charge is "to ensure compliance with stricter water quality standards," such as the Environmental Protection Agency's (EPA) Surface Water Treatment Rule (SWTR) and Safe Water Drinking Act of 1993, which mandate filtration of all surface water.

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Ladies and Gentlemen Stop Your Engines! One Step Closer to Ensuring NYC DEP Goes Green

View the results of the American Lung Association "State of the Air" survey at <http://www.stateoftheair.org/>

"By turning off your engine you will also be helping our agency reach a mandated goal to reduce harmful air emissions."

—Melissa Whitley, Environmental Compliance Specialist, BWSO EHS

Did you know that a recent study conducted by the American Lung Association revealed that NYC was ranked the 8th worst city in the nation for ozone pollution? The study also disclosed that NYC was the 13th worst city in the nation for short-term particulate pollution.

While poor air quality may only be a nuisance to some, it can have significant impacts on the health of infants, the elderly, and individuals who suffer from respiratory diseases. As in many urban environments, the emissions produced from transportation in NYC account for a large percentage of the local air pollution. The burning of fossil fuels, which releases pollutants such as carbon monoxide, nitrogen oxide, and toxic particulate matter, contributes significantly to poor air quality.



Picture Taken By BWSO EHS Staff

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The Croton Water Filtration Plant –2012



"Once completed the main treatment plant will be almost entirely underground at the existing Moshulu golf course on the edge of Van Cortlandt Park in the Bronx, which will be refurbished post-construction."

—Jane Weber, Risk Management Program (RMP) Specialist, BWSO EHS



**WIN A MCDONALD'S
 GIFT CARD!
 TAKE QUIZ ON PAGE 3**

The U.S. Environmental Protection Agency's (EPA) Criminal Investigation Division is strict when it comes to unlawful environmental offenders. Below are three stories of fugitives who recently made the environmental crime list:

1. Investigations into the May 11th, 1996, ValuJet Flight 592's fire and fatal crash revealed that the airline's maintenance contractor, SabreTech, improperly stored cabin oxygen generators in the plane without proper restraint and labeling of its contents. Mauro Valenzuela was one of two mechanics charged with mishandling the hazardous material. The outcome: SabreTech was issued \$2 million in fines, plus an additional \$9 million in restitution. Release was granted to Mr. Valenzuela's co-workers; however, Mr. Valenzuela is required to appear in court once detained.
2. Denis L. Feron, along with five other co-conspirators, and Chemetco Inc., a copper smelting company, were found guilty of working together in an effort to violate the Federal Clean Water Act. According to allegations, Feron and the others rigged a secret pipe which they used to illegally dump zinc, lead and cadmium into Long Lake, Illinois for as long as ten-years or possibly more. In 2001, Feron's colleagues were formally convicted of the crime, while Chemetco Inc. filed for bankruptcy. Consequently, the facility was sealed and placed on the EPA's Superfund list. If convicted, Feron faces a maximum prison sentence of up to five years, a fine of \$250,000.00, and similar penalties for allegedly fleeing the country.
3. Father and son duo, Carlos Giordano and Alessandro Giordano, were arrested in connection with importing and selling two dozen Italian Alfa Romeo cars which did not meet the Clean Air Act and vehicle safety standards. While it is legal to import noncompliant vehicles for personal use, it is illegal to sell them. The pair face a five-year sentence, seven counts of wire fraud, three counts for making false statements on documents required under the Clean Air Act, and a \$5 million fine. Currently, the Giordanos are presumed to be hiding out in Italy.

For reference, please see <http://green.msn.com/Home/EPAs-Most-Wanted-Fugitives-Stories-Behind-the-Crimes>

UPCOMING TRAINING:

July-August 2009

EH5 AWARENESS/ HEARING CONSERVATION TRAINING

Questions?

Contact Nelson Leon (718) 595-5544

For the past several years, many DEP employees and groups have been very involved in directing the Croton Water Filtration Plant project. By providing treatment for the Croton System, the goals of the filtration project are to:

1. Allow DEP to continue to provide drinking water of the highest quality;
2. Prevent the periodic shutdown of the Croton System, particularly at times of the year when the City's water demand is at its highest;
3. Meet the requirements of existing and future regulations; and
4. Elevate our ability to take advantage of the existing effective yield and operational flexibility of the City's overall water supply system.

The Croton Water Filtration Plant is scheduled to enter full time service in 2012. The plant is capable of treating 10-30% of the City's needs – depending on conditions.

NYC DEP sought to offset construction inconveniences to Bronx communities by spending millions to upgrade parks and providing other amenities in the Borough prior to starting construction. Once completed the main treatment plant will be almost entirely underground at the existing Mosholu golf course on the edge of Van Cortlandt Park in the Bronx, which will be refurbished post-construction. Above-ground construction will be minimized. Below-ground facilities will house administration offices, an on-site laboratory, chemical storage facilities, and ancillary equipment.

Associated work will provide a raw water tunnel from the New Croton Aqueduct, with a pumping station and wet well, corresponding pumping arrangements for treated water, and another tunnel linked to the City's distribution network. The processes to be used are largely conventional and well established, but some of them are new to BWSO. Technologies being used at the plant include a stacked Dissolved Air Floatation, (DAF), which utilizes mechanic and media chosen to optimize

particulate removal, the filtration system itself, which is new to our downstate operations, and the use of ultraviolet (UV) light. The Supervisory Control and Data Acquisition (SCADA) computer system will be used for gathering and analyzing real time data and controlling the processes associated with water treatment. SCADA system will help ensure integrated process balance through monitoring and controlling the plant's state-of-the-art systems.

Bureau EHS is working with and under the guidance of BWSO's Micheal Keating, P.E. (Chief, Croton Operations) and Sindy Molyono, a newly hired Process Safety Specialist, to help prepare for environmental and safety compliance within the treatment operation. There is a mix of old and new technologies at the Croton Water Filtration Plant, which will require a full review of the process in a systematic way to identify potential hazards and compliance challenges pre-start up. Like most of our existing facilities, the plant will trigger many EHS requirements such as proper handling of chemicals to prevent spills, lockout-tagout programs, bulk storage registrations, and confined space inventories. BWSO EHS will also have to brainstorm for answers on additional health and safety issues that the employees might encounter in an underground building such as ventilation, and emergency plans. All of our EHS policies will be reviewed, and going forward, strategies and compliance programs will be implemented.

For more information visit:

<http://www.nyc.gov/html/dep/html/news/croton.shtml>



Ladies and Gentlemen Stop Your Engines!

One Step Closer to Ensuring NYC DEP Goes Green Continued from Page 1

Recognizing this, NYC recently enacted a law, which restricts the amount of time a vehicle may idle. NYC Administrative Code §24-163, which became effective in January 2009, prohibits vehicles from idling for more than three minutes at a time. You may be thinking, "OK, what about when I'm on the BQE at 4:00PM?" or "I can't clean a catch basin in three minutes or less!" Of course, there are a few exceptions to the rule, including when your vehicle is:

1. In traffic;
2. Idling for maintenance purposes;
3. Involved in an emergency situation;
4. A diesel-fueled truck operating in an ambient air temperature below 25°F for more than two hours; and
5. Powering an auxiliary function or apparatus (examples include basin trucks, flusher trucks, dump trucks, vactors and rodders to name a few).

By turning off your engine you will also be helping our agency reach a mandated goal to reduce harmful air emissions. NYC Administrative Code §24-803 requires that city government operations reduce emissions by a minimum of 30% by 2017 through the policies, programs, and actions outlined in PlaNYC 2030. One of the goals of PlaNYC is to achieve the cleanest air quality of any major U.S. city. Want to check our progress?

Visit PlaNYC 2030 at <http://nyc.gov/html/planyc2030>

What else can you do to improve air quality?

- Drive at the speed limit;
- Avoid sudden stops and starts;
- Don't top off the fuel tank;
- Check tire pressure monthly; and
- Keep your vehicle well maintained.

Please think twice before you leave your pick-up trucks and other vehicles idling in your garages, yards, and worksites! It's not only against the law, but bad for your health, your co-workers health and the environment!

NYC Lead Service Lines

In January 2005, DEP began an extensive inspection of the plumbing within City-owned facilities. Fifty (50) City-owned lead service lines were identified and replaced in 2005. Additional lead service lines have since been identified, and contracted for replacement at various locations. DEP continues to monitor City-owned properties that potentially have lead service lines. This is accomplished through Tap Record searches and referrals from other city agencies.

What is a lead service line?

A service line is a connection from the street main to a building. Lead is a heavy metal that is hazardous to health, especially for young children and pregnant women. It has been used for many years in the plumbing industry. In severe cases, exposure to lead can damage the nervous system, kidneys and reproductive system. Lead-based solder was used to connect copper pipes and brass faucets, and plumbing pipes also contain lead. Many older homes and buildings have lead service lines.

How does lead get into our drinking water?

Lead does not occur naturally in drinking water. The water supply that is delivered to NYC from upstate reservoirs is virtually lead-free. Lead leaches into the drinking water as it passes through pipes and household plumbing fixtures that contain lead. Lead is like any other metal, it corrodes. This corrosion releases lead into the drinking water.

“DEP offers a free Residential Lead Testing Program which allows all NYC residents to have their tap water tested at no cost.”

Federal Regulations

In June 1986, the federal government passed laws in order to protect the public from exposure to lead in their drinking water. These laws reduced the amount of lead allowed in plumbing components. The Safe Water Drinking Act (SWDA) requires that only “lead-free” pipe, solder or flux may be used in the installation or repair of public water systems or any plumbing in a residential facility that is connected to a public water system, which provides water for human consumption. Public water suppliers are required to collect water samples at the consumer’s tap to

determine if the lead is in compliance. If the average lead level for the homes tested is below the Action Level, the system is in compliance. If not, the water supply utility may be required to replace lead service lines under their control, or add a corrosion inhibitor.

“Lead-free,” as defined in the SWDA means that the maximum allowed concentration is:

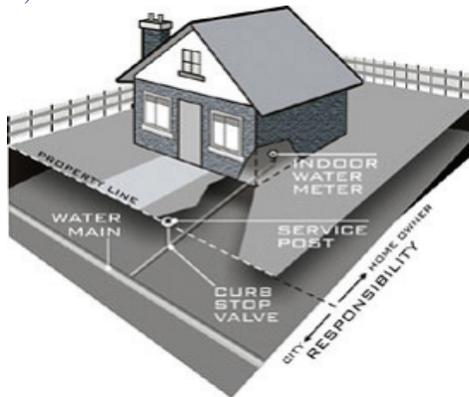
- 0.2% in solder and flux;
- 8.0% in pipes and pipe fittings; and
- 4.0% by dry weight in plumbing fittings or fixtures after August 2001.

The Environmental Protection Agency (EPA) Lead and Copper Rule established an action level of 15 parts per billion (ppb) for lead in drinking water. The rule specified a list of requirements for determining the concentration of lead in the distribution system, and the steps to take to reduce lead levels in drinking water, if identified.

Efforts to maintain high quality drinking water

All surface and ground water entering the NYC distribution system is treated with food grade (extra-pure) phosphoric acid. Phosphoric acid is added to create a protective film on pipes that reduces the release of metals such as lead from household plumbing. Orthophosphate was initially used to help coat the inside of the pipes.

DEP has taken a proactive role in educating the public about lead in drinking water. DEP offers a free Residential Lead Testing Program which allows all NYC residents to have their tap water tested at no cost. To request a free kit to test for lead in your drinking water, call the City of New York 24-hour Helpline at 311 or (212) NEW-YORK.



**TAKE THIS QUIZ: SUBMIT CORRECT ANSWERS FOR A CHANCE TO WIN A FREE GIFT CARD
BE SURE TO INCLUDE YOUR FULL NAME AND WORK ADDRESS. FAX: (718) 595-5541 AND/OR
EMAIL: BWSOEHS_suggestions@dep.nyc.gov**

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|--|---|
| <p>1. Effective January 2009, NYC administrative code §24-163 _____.</p> <p>a) mandates the filtration of all surface drinking water</p> <p>b) requires that city government operations reduce air emissions by a minimum of 30% by 2017</p> <p>c) prohibits vehicles from idling for more than <u>five</u> minutes at a time</p> <p>d) requires the Environmental Protection Agency (EPA) to enforce regulations to protect the public from exposure to known hazardous airborne contaminants</p> <p>Answers for April 2009 Newsletter Quiz:
1) D 2) B 3) B 4) C</p> | <p>2. All surface water and ground water entering the New York City's distribution system is treated with extra pure _____ to reduce the release of metals from household plumbing.</p> <p>a) Phosphoric Acid b) Acetic Acid</p> <p>c) Citric Acid d) Hydrochloric Acid</p> <p>3. Which of the following statements are effective steps for improving air quality?</p> <p>I) Monthly inspect your vehicle's tire pressure.</p> <p>II) Avoid sudden stops or starts when driving.</p> <p>III) Drive as fast as you can to reduce your travel time on the road.</p> <p>IV) 'Topping-off' your vehicle's fuel tank when filling up at the gas station.</p> <p>a) None of the above b) III and IV c) I and III d) I and II</p> |
|--|---|

Thank You for a Job Well Done!

Dear BWSO Colleagues:

I would like to take a few moments to recognize your hard work and successes in continuing to make BWSO a better and safer place to work. All BWSO facilities have made improvements not only by the numbers but in the involvement at all levels in the organization. Yes, we still have work to do, but we are on the right path!

Of recent note is the outcome of a full and very rigorous Process Safety Management/Risk Management Program (PSM/RMP) compliance audit at Hillview and Jerome Park Reservoirs. In total, there was only one finding identified during nine (9) days of auditing! Even more significant than the single finding, is the clear signal that process safety has become integrated into the fabric of the operation and virtually all Reservoir Operations employees are aware, knowledgeable, and involved in the safety effort.

All BWSO employees are responsible for EHS performance as measured by our Bureau and OEHS compliance audits, increased participation in Bureau/Agency employee suggestion programs and recognition programs, and day to day feedback we receive from you on safety issues.

As many of you know, Deputy Commissioner James J. Roberts, P.E. and EHS staff members are making our way to all facilities over the next month or two as part of the EHS Awareness Communications Campaign. We look forward to speaking with you in person about your concerns, successes, and most importantly your ideas. Many of our best ideas come from you!

It is clear that we all share a common goal: to serve the City of New York; to do our jobs well; and to do so in a way that is safe for ourselves, our co-workers, and the public we serve.

We look forward to seeing you.

Sincerely,
Persis D. Luke
Director, Environmental Health & Safety

NYC Department of Environmental Protection

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We'd love to hear
from you!

E-mail us at:

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A Day in the Life of an Associate Project Manager, Taveesak Limratana

Are you familiar with the term “red pen intervention?” Well, that’s the perfect term to describe the appearance of Taveesak Limratana’s final review of a drainage work that was submitted to the NYC DEP from just *one* of several independent consultants hired by private developers to perform work on NYC DEP’s sewer lines.

On June 9, 2009, two Conduit reporters were given the opportunity to shadow Taveesak Limratana, an Associate Project Manager at the BWSO Review and Construction Compliance Division’s Drainage Review Section, for a day—and an educational day it was!

As a member of the Drainage Review Section, Mr. Limratana and his colleagues are involved, one way or another, in many of the construction projects that you may come across in NYC.

8:15AM: Limratana starts his work day at Lefrak usually by reviewing drainage work involving drainage proposals, site connection proposals, sewer plans and amendments to the City’s Drainage Plan sent to DEP by private engineering companies. Lim’s main task at BWSO is to carefully review these plans by thoroughly examining the sewer elevations, pipe sizes, etc. to ensure that the proposal plans are accurate and in compliance with the City’s rules and regulations, so that they can ultimately be approved. If there are errors found in the plans, the private engineering companies must then revise and resubmit the proposal plans to DEP until final approval.

On average, Limratana reviews about two or three different types of plans a day for our NYC infrastructures, but this is not all. There are several instances throughout a typical work day in which Lim’s knowledge, expertise, and experience is tapped to take care of high priority jobs that his manager, David Ramia, Chief of the Review and Construction Compliance Division, and/or supervisor Paul Faublas, Acting Chief of the Drainage Review Section, is working on.

“Communication is key at the Drainage Review Section. It is the only way to efficiently manage the influx of work here,” Limratana reported. “Repeatedly, engineers from the private companies attend our review meetings in order to discuss the status of the projects, and the results found from our reviews.” Analysis takes a lot of time, and communicating on paper will not suffice. “There are times when a consultant may have to come several times during the progress of work.”

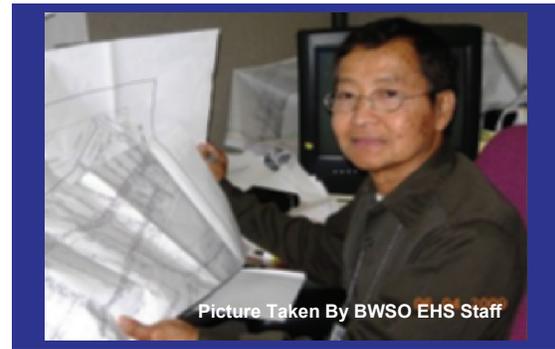
After lunch at one of the nearby eateries in Elmhurst

1:15 PM: Lim has already finished reviewing the bulk of different types of applications that he has set aside for the day. He finalizes a letter to a private engineering company that must resubmit a complete site connection proposal plan because the package he received was incomplete.

1:25 PM: A consultant calls Lim to clarify a submitted drainage proposal plan, which illustrates the layout of the sanitary pipe outlet for his proposal. Limratana explains that the correct term to use is “drain,” not “sewer” because it was not built according to the City’s Drainage Plan.

1:40 PM: Lim explains to us that the drainage proposal plans submitted to DEP are for storm, sanitary, or combined drains which are to serve the buildings in NYC.

“Taveesak is very valuable to our staff. He plays a major role in our mission to save, protect and keep our City’s drainage functioning,” his supervisor reported.



Taveesak Limratana, Associate Project Manager

If a drainage proposal plan is accepted, then a letter will be sent to the consultant to submit their construction plan. Finalization of construction plans can take years, but Lim takes on each project as he receives it, with the exception of projects that need priority attention.

1:59 PM: David Ramia asks Lim to review a previous watercourse plan that involves a ditch that may impact the flow of water. David asks him to compare previous proposal plans for the project to determine what changes must be made to the plan.

2:04 PM: Lim and David look at the plans together. Back two years ago, when a site visit was made, they noticed that there was a manhole at the beginning of the watercourse. However, it was not shown on the submitted plan for the watercourse access maintenance. David gives the proposal to Paul Faublas for a hydraulic review.

3:40 PM: Lim seeks Paul for a final review of a site connection proposal plan. He explains that the engineers did not see that there is a sanitary sewer crossing Hillside Avenue carrying sanitary flow from a large upstream area. The proposal had been modified: the original building was a house, but the proposal plan is for a housing complex. Lim explained to us that the flow evaluations made for a house would be different from those for a housing complex because less waste would travel out of a one-family house than a six-family house. Paul proposed that the engineers perform an evaluation of the hydraulic grade line to see if it will back up. If the sewer line will not back up, the site connection proposal plan can be approved.

3:50 PM: Lim continues his review of the site connection proposal plan.

4:15 PM: Lim leaves work for the day.

Taveesak Limratana graduated from Polytechnic University with a Bachelor of Science and Master of Science in Civil Engineering. He began his 22-year career with DEP in 1986 as an Assistant Civil Engineer at 40 Worth Street in Manhattan. He was promoted to City Planner in July 2001 and Associate Project Manager in November 2007. Lim is of Thai descent, and is a proud husband, and father of two. He is detail oriented, well organized, and is always ready to answer any question that may come his way. “Taveesak is very valuable to our staff. He plays a major role in our mission to save, protect and keep our City’s drainage functioning,” his supervisor reported.