

Intro 874 – Radon
Testimony by James Colgate
October 15, 2009

Good Morning Chairman Dilan, Councilmember Gennaro and members of the Housing and Buildings Committee. My name is James P. Colgate, I am Assistant Commissioner for Technical Affairs and Code Development at the Department of Buildings. I am here this morning with Mona Sehgal, general counsel to the Department, and other members of our staff.

Thank you for allowing me the opportunity to testify before your committee on Intro 874.

As you know, in 2005 the Council passed Local Law 99, which adopted a new plumbing code for New York City. The City's Plumbing Code is now one of the most modern in the country. As with the whole family of the City's Construction Codes – the Building Code, the Fuel Gas Code, the Mechanical Code, and the Electrical and Plumbing Codes, the Plumbing Code will be reviewed by the Department and industry on a cyclical, periodic basis. However, because new issues frequently arise out of cycle,

bills such as Intro 874 can help keep the Code up to date by making amendments when they are needed.

Intro 874 would amend the Plumbing Code in three different respects:

First, sections 1, 2, and 14 would add language to the Plumbing Code, making clear that piping systems to vent methane or radon should be systems that are approved by the Department of Buildings. This would achieve the salutary purpose of setting minimum standards for these systems which, while not widespread in the City, are indeed important in the structures where they are required.

Sections 3 through 13 of the bill provide for the Department of Buildings to promulgate minimum acceptable standards for mechanically fastened joints in water supply piping or waste piping. This is a new technology, and would allow the Department to ensure that the products used are safe and sufficiently reliable for use.

Finally, Section 15 of the proposal clarifies that engineered waste piping system relying on computer models for their design should be approved by the department. This provision will ensure that the appropriate level of scrutiny by my department be afforded to these complex systems.

The Department of Buildings has no objections in principle to any of these proposals. While we have been working with the Law Department to amend some of the language in the bill and to conform to the format and language of the City's new Plumbing Code, the basic purpose of the bill clarifies the existing text of the plumbing code and institute sensible changes.

I will be glad to answer any questions that you have regarding the bill.

Statement of Terence O'Brien
Before the Committee on Housing and Buildings
10/15/09 Regarding Proposed Intro. No. 874-A

Good morning. My name is Terence O'Brien and I am the deputy Director of the Plumbing Foundation. The Plumbing Foundation City of New York is a nonprofit association of licensed contracting firms, engineering associations, manufacturers and suppliers whose mission is to ensure the public health through the enactment and enforcement of a safe Plumbing Code. In connection with that mission we regularly meet with legislative and regulatory bodies that pass laws and promulgate regulations that affect the plumbing industry.

First, currently the New York City Administrative Code requires that only licensed master plumbers can install and maintain piping for the supply of water, medical gas, fuel gas, sanitary drainage and venting. Recently, new piping systems for dangerous gases like methane and radon have been developed and introduced into usage in NYC. Currently, the Administrative Code does not address who is permitted to install these potentially hazardous gas systems. Presently, anyone regardless of training can construct the vent piping to these gases. Sections 1 and 13 of this bill would require methane and radon venting systems be installed by licensed plumbers, which is virtually the same scope of work licensed plumbers are currently required to perform.

Second, with the implementation of the new Plumbing Code on July 1, 2008, methods for joining water supply and drainage piping (be it be for

example brass or copper piping etc.) was expanded from soldering and brazing to include mechanical joints. A common method to join pipe, mechanically, is using devices that compress the pipe. The only requirement for these new methods of mechanical joining is that they must be installed "...in accordance with the manufacturer's instructions." (605.23). Manufacturers should not be the sole determinant as to whether their systems of joining piping are adequate in New York City. Sections 2 through 14 of this bill would amend the Code to require manufacturers obtain approval from the Commissioner of the Department of Buildings before their new mechanical joining method is used in New York City.

Lastly, up until the enactment of the new Code on July 1, 2008 venting systems had to be designed to specific Code requirements with little deviation. Under the 2008 Plumbing Code (sections 918.1 and 919.1) the engineering for venting systems must comply with the Building Code. Furthermore, computer designing is permitted when developed by a licensed professional. Sections 14 and 15 of this bill would amend the Code to require that these programs be "...approved by the [DOB] Commissioner to ensure compliance..." with the Code.

The requirements that (1) methane and radon piping be installed by licensed master plumbers, (2) that DOB approves the manufacturer's specs. of mechanical joints and (3) that DOB approves venting design systems are all measures that will help safeguard the City and its population. The Foundation is in full support of these proposed amendments to the Code.

Chairman Dilan and Members of the City Council

Committee on Housing and Buildings: I'd like to thank you for giving me this opportunity to speak in support of INT No 874. The adaption of the INT 874 will go a long way to ensure the health and safety of New Yorkers. Each provision will more clearly define the methods of installation required to meet that end.

The amendment to Section PC202, "Vent Piping," would add the vent piping required for the removal of methane and radon gases. Both are hazardous gases that are naturally occurring in the soil. Recent technology has led to discoveries of these gases being present underneath the foundations of buildings and houses. Their safe removal would require a piping system to do that.

Natural gas, the kind supplied by our utilities for use in the home, is 87% methane. At concentrations of as little as 5%, methane mixed with air is extremely volatile and a resulting explosion can level the structure. Methane gas found in the soil is produced by decaying organic waste. It can be eons old or recently

produced in a landfill. Over time, being lighter than air, methane will make its way to the surface. If left alone, as in a field, the escaping methane disperses easily into the atmosphere. However, if trapped by a basement slab, it can collect under the form, and find its way into the building through cracks and penetrations. The building above, with its fluctuating temperatures and pressures, actually helps to accelerate this process. A vent piping system, designed for methane gas, would resolve the problem.

Vent piping in sanitary systems have been installed as long as there have been plumbing codes. Unsanitary and hazardous gases, a byproduct of human waste, are removed to the building's sanitary vent system, and expelled through a roof opening. Strict regulations regarding sizing, location, assembly, materials and testing have led to better quality of life for New Yorkers. Illness and disease from sewer gases are prevented by proper venting.

The plumbing code has insured that correct installation of plumbing systems is done by licensed professional plumbers. The piping for methane gas should also fall under their jurisdiction.

Radon mitigation involves the installation of a piping system that needs to be vented. Radon is a colorless, odorless radioactive gas which comes from the natural breakdown of radium. The Surgeon General has warned that radon is the second leading cause of lung cancer in the U.S. The E.P.A. estimates that as many as 1 in 15 homes have elevated annual radon levels. Testing is the only way to know if the property is at risk.

The E.P.A. recommends that a qualified contractor be used to mitigate homes because of the specialized technical experience required. Without proper equipment or technical knowledge, one could actually increase radon levels or create other potential hazards.

The piping installation for radon mitigation involves routing perforated pipe through a layer of gravel and extending the pipe, as a vent, through the building, to a terminal on the roof. An active system employs a fan to help draw the air. A passive system relies on conductive flow of air, upward in the vent.

Both mitigation systems are currently being installed at various job sites throughout the city, but not necessarily by the skilled craftsmen employed by licensed plumbers. The passage of INT No 874 would insure that only licensed professionals would do this work. The public's rightful concerns about their safety must be addressed. The knowledge that installation of these critical systems was in the hands of a trade that has successfully installed similar systems would go a long way to ease their fear.

The development of a new Building Code for the City of New York has coincided with a revolutionary method of building – going green. While at the beginning stages now, it is inevitable that it will be the standard by which all new development will be built. To a plumber, going green means one thing – water conservation, whether in fixture design or in piping systems that reuse water. Distribution of grey water throughout a building for use in non-potable plumbing fixtures, such as a toilet, has the potential of exposing the public to health hazards previously not considered.

The weakest link in any piping system is the joint. The assurance that the joining method will hold and pass the test of time is even more critical when discussing non-potable water distribution systems. A burst joint in a pipe distributing non-potable water means that a person will be dealing with a more serious condition than a wet wall or carpet. The standard, to which these joints are designed, therefore, comes into question.

The concern that we have is that the code requires that mechanical joints for water distribution be installed in accordance with the manufacturer's instructions. Is this enough?! The previous code required compliance to the standards set by testing agencies after reviewing the product. Water distribution piping met the standards of agencies such as ASTM, AWWA, ASME and AWS before they were allowed to be installed. The passing of INT NO 874, requiring approval by the commissioner, is the step needed to insure that these joints will hold.

We're looking forward to a green future, not a leaky one.

**Testimony Before the
New York City Council
Committee on Housing and Buildings**

Int. No 874

**John J. Murphy
Financial Secretary-Treasurer
UA Plumbers Local No. 1**

Thursday, October 15, 2009

Chairman Dilan and Members of the City Council Committee on Housing and Buildings:

As the Financial Secretary-Treasurer of UA Plumbers Local 1, I would like to extend our gratitude for holding today's hearing to consider Int. 874. This much needed legislation would amend the administrative code of New York to address the lack of regulation for recently developed piping systems designed for the venting of dangerous methane and radon gases. While this Union was and remains a supporter of the current and recently adopted administrative code, oversights in the current code implicates potential safety or health hazards associated with the installation of new methane and radon gas piping systems. The adoption of Int. 874 would ensure that the highest level of safety and expertise are utilized in the installation and modification of all piping systems.

Int. 874 is consistent with the goals of the New York City administrative code, which has recognized and regulated the installation of plumbing and mechanical systems for the past 70 years. Specifically, Int. 874 will extend provisions of the current code to (1) ensure that only licensed professionals install new piping systems, (2) to require that the Department of Buildings ("DOB") provide oversight to the mechanical joints that are used in the installation of water service, water distribution,

drainage and vent piping in New York City, and (3) to further require the DOB to provide oversight to the installation of any piping system that is not designed to the specific code requirements.

While the current code permits only licensed master plumbers to install, alter, or repair water supply, medical gas, fuel gas or sanitary drainage and vent piping, no such provision is contained for these new piping systems. Section 1 of Int. No. 874 would fill that gap and require that licensed plumbers install these new systems. Such a requirement ensures that the best trained and most qualified persons install all of New York City's venting systems.

For example, under the old plumbing code, with the exception of screw pipe, the most common method of joining brass or copper water pipe was soldering or brazing. The requirements for soldering and brazing are specific. The new plumbing code now permits piping to be joined by mechanical means. The only safety requirement for these new means is that they be "installed in accordance with the manufacturer's instructions." There are numerous types of mechanical joining systems available today. This presents significant safety and health issues because it gives to manufacturers the sole discretion to determine whether their own mechanical systems are safe. To allow manufacturers to self-regulate, removes any

objective or meaningful oversight of the installation process. Int. No. 874 would require that manufacturers obtain approval from the DOB commissioner before new mechanical joining systems for water service, water distribution, drainage and vent systems are used in New York City.

Furthermore, the previous plumbing code required that the design of venting systems conform to certain code specifications. The new plumbing code permits computer program designed venting systems that are different than the minimum code requirements. Again, there is no oversight of the design of the venting systems, which creates numerous health and safety issues. Int. No. 874 would require that the DOB review all designs that do not meet the minimum standards of the code and provide approval before installation.

Given the importance of plumbing and piping systems and the welfare of our City, we ask that you support Int. No. 874 because it addresses important safety concerns that the new plumbing code has simply overlooked.

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

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I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

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I represent: Dept of Buildings

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