

Hazardous Materials Management in New York City 2011 Annual Report



**Environmental
Protection**

Michael R. Bloomberg, Mayor
Carter H. Strickland Jr., Commissioner





October 1, 2011

I am pleased to present New York City Department of Environmental Protection (DEP) Hazardous Materials Management 2011 Annual Report. You will find data from fiscal year 2011, as required by Local Laws 26 and 92, also known as the "Community Right-to-Know Laws" as well as information about DEP's comprehensive Right-to-Know Program. Community Right-to-Know Laws require certain facilities to report information about hazardous substances they store, use, and process. Having a database of this information protects community members, facility workers, emergency response personnel, and the environment in the event of an accidental or premeditated hazardous substance release.

In 2011, DEP performed more than 8,900 inspections of facilities that store hazardous substances to ensure compliance under the Right-to-Know Law. DEP also began a new hazardous substance cost mitigation initiative for implementation during emergency responses to facilitate the timely removal of abandoned hazardous substances to preserve public safety.

To learn more about DEP's Right-to-Know Program, please visit our website at www.nyc.gov/dep, or contact the Right-to-Know Program via email at deptier2@dep.nyc.gov, by phone at 718-595-4659 or write to us at Right-to-Know Program, New York City Department of Environmental Protection, 59-17 Junction Boulevard, Flushing, New York, 11373-5108. To report materials that could be hazardous, please contact 311.

Sincerely,

A handwritten signature in black ink that reads "Carter H. Strickland, Jr." in a cursive script.

Carter H. Strickland, Jr.
Commissioner



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Introduction

In 1987, the New York City Hazardous Materials Emergency Response Law, or “Spill Bill,” was ratified by New York State. The law recognizes the need to protect human health and the environment against the accidental or threatened release of hazardous substances, and empowers DEP with the jurisdiction to respond to such releases.

Local Law 26 of 1988, the Community Right-to-Know (RTK) Law, requires the City to effectively regulate the storage, use, and handling of hazardous substances. As part of the law, DEP oversees the use and storage of hazardous substances that pose a threat to public health and the environment in the city through its Right-to-Know Program.

The RTK program manages the reporting and storage of hazardous substances by requiring businesses and facilities to annually file a report detailing the quantity, location, and chemical nature of every hazardous substance stored within their facilities throughout the five boroughs. The program also grants DEP the authority to enforce action by issuing Commissioner’s Orders and Notices of Violation to help ensure safety and stability in the regulation of hazardous substances and compliance under the Spill Bill and RTK law. The reported information gathered from facilities is tallied and stored in the Citywide Facility Inventory Database (CFID) that is readily made available to city, state, and federal agencies during emergency responses.

The goal of the Right-to-Know Program and the CFID is to enhance citywide preparedness and to minimize the number of hazardous substance releases that often put emergency responders and the public at risk. These hazardous substances or materials are also referred to as HazMat.

DEP’s Bureau of Police and Security and Division of Emergency Response and Technical Assessment (DERTA) is the group within DEP authorized to implement and enforce the Right-to-Know Law. DERTA is a specially trained emergency response unit that responds to hazardous releases. The HazMat responders are comprised of chemists and engineers who possess the formal education, technical and tactical expertise to effectively operate and carry out emergency responses collectively enforcing the Spill Bill and the Right-to-Know Law.

All the information for DERTA’s HazMat responses are archived in its hazardous materials response database. The database consists of detailed information regarding the location of an incident, the incident description, the types of chemicals involved, and the emergency response action taken for remediation.

DEP has prepared the New York City Hazardous Materials Management 2011 Annual Report according to §24-715 of Local Law 26 of 1988.



All reporting facilities undergo routine Right-To-Know inspections, which involve a tally of their chemical inventory.

Analysis of the Citywide Facility Inventory Database

Growth of the Citywide Facility Inventory Database

On or before March 1 of each year, facilities that store hazardous substances are required under the Right-to-Know Law to file their inventory through DEP's Right-to-Know (RTK) Program. Facility Inventory Forms (FIFs) are submitted to provide detailed quantitative information for substances stored during each fiscal year. DEP collects the reported information and archives it in the Citywide Facility Inventory Database (CFID). The CFID currently contains 8,837 reporting facilities within New York City, a 5.3 percent increase over the 8,395 facilities reporting in the 2010 Fiscal Year.

To further improve and simplify the filing process for facilities reporting under RTK, DERTA uses its online Tier II Filing System to allow facilities the option and convenience of submitting their chemical inventory electronically as an alternative to handwritten hard copies.

DERTA continually enhances the user-friendly interface of their online reporting system to help facilitate the rigors of filing hard copies by hand. The online system gives the facility the advantage of simply entering their inventories and quantities, and the computer essentially expedites the process by estimating all the calculations and fees to ensure proper submission. This option not only saves paper but also eliminates the timely correspondence letters sent by mail as a result of submission errors. It also keeps entries accurate and allows for greater efficiencies and management in tracking data.

As a result, the data in the CFID will be more accurate and up to date which can attribute to a higher level of performance by emergency responders from various city agencies.

Over the years, more facilities have opted to file electronically. During the 2010 filing year, 65 percent of facilities filed using our online Tier II filing system. In the previous year, 53 percent filed. In 2012, the next compliance year, DERTA will allow the added convenience of submitting payments online.

The information contained within the CFID is often used by the New York City Police Department, the Fire Department of New York, the New York City Office of Emergency Management, the New York City Department of Sanitation and the New York City Department of Health and Mental Hygiene. The CFID also provides information to elected officials, the public, and the city's Local Emergency Planning Committee to further increase safety awareness.

The CFID data is collected under both the New York City Community Right-to-Know Law and Title III of the Superfund Amendments and Reauthorization Act (SARA). During Fiscal Year 2011, there were 764 new facilities entered into the database, while 65 became exempt from filing and 257 went out of business.

The comprehensive information collected by the Right-To-Know Program consists of:

- Facility Inventory Forms
- Material Safety Data Sheet for each reportable chemical
- Risk Management Plans (RMPs), if required
- Site Plans indicating storage location
- Notice of accidental spills and releases
- Extremely Hazardous Substance/Regulated Toxic Substance Reports
- Name(s) of emergency coordinators at extremely hazardous substance facilities

Number of Facilities in CFID Reporting Hazardous Substances by Community Board

Community Board	Number of Facilities In CFID				
	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	114	266	345	349	286
2	106	168	184	312	145
3	42	93	138	112	131
4	88	65	283	115	
5	58	174	622	186	
6	68	137	265	81	
7	61	135	135	342	
8	80	61	219	125	
9	106	61	84	122	
10	82	89	72	114	
11	105	130	106	102	
12	166	110	123	244	
13		93		203	
14		82		71	
15		112			
16		50			
17		131			
18		188			
TOTAL:	1,076	2,145	2,576	2,478	562
Total Number of Facilities in CFID – 8,837					



During a RTK inspection, a facility has failed to properly label its hazardous chemicals, resulting in the issuance of a Notice of Violation (NOV) by DERTA.

Facilities in CFID Reporting 10,000 Pounds or More of a Hazardous Substance by Community Board

Of the 8,395 facilities in the CFID, 1,296 facilities reported 10,000 pounds or more of a hazardous substance. The percent-of-city total represented by each borough in descending order is:

Manhattan	36.50%
Queens	27.08%
Brooklyn	18.44%
Bronx	10.65%
Staten Island	7.33%

Number of Facilities Reporting 10,000 Pounds or More of a Hazardous Substance by Community Board

Community Board	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	21	40	103	51	46
2	14	37	31	43	25
3	2	7	5	11	24
4	8	6	68	6	
5	8	20	120	29	
6	9	14	44	7	
7	13	20	16	50	
8	10	4	30	9	
9	17	9	15	7	
10	13	6	6	16	
11	9	9	11	21	
12	14	4	24	31	
13		9		55	
14		7		15	
15		9			
16		4			
17		7			
18		27			
TOTAL	138	239	473	351	95

Total Number of Facilities Reporting 10,000 Pounds or More of a Hazardous Substance – 1,296

Facility Right-to-Know (RTK) Inspections

With a total of 8,837 facilities reporting annually, the RTK program grants DERTA the jurisdiction to enforce the Right-to-Know Law by conducting facility inspections on a routinely scheduled basis throughout the city. The inspections often involve a full site inventory analysis that also includes an assessment in the proper storage and segregation of hazardous substances by class. Class is usually related to chemical compatibility and hazardous characteristics like corrosivity, flammability and toxicity. Scheduled inspections performed by DERTA personnel physically justify the quantities of hazardous substances reported by the facility in the CFID. In turn, all discrepancies are updated by DERTA in an inspection report.

In the past year, DERTA has designed an in-house inspection reporting system that enables DERTA inspectors to remotely submit their RTK inspection data from the field. The system is called the DERTA Inspection Reporting System (DIRS). The DIRS integrates the CFID data, which consists of the Tier II Filing data and Geographic Information Systems (GIS) mapping data, with the inspection data generated by DERTA inspectors. The key approach

in the design of the system is its functionality as a web-based reporting system that allows DERTA inspectors the ability to readily access information directly from the CFID when performing an inspection or responding to an emergency. Other advantages include its ability to handle simultaneous data input from multiple users, a reduction in data corruption, and a greater reliability with less maintenance concerns. In turn, it creates an enhanced inspection database platform that can easily be tracked and managed for various functions, which can also include violation disputes.

During an emergency response, DERTA also conducts immediate, unscheduled, RTK inspections of facilities responsible for hazardous substance releases, involving odors or spills. The outcome of these inspections have the potential to detect unreported hazardous substances that, as a result, are cited as illegally stored. These findings require the facilities to file their stored substances under the RTK Law, and allow DERTA to take action by issuing a Commissioner's Order and Notice of Violation (NOV) if a facility fails to comply to the order.

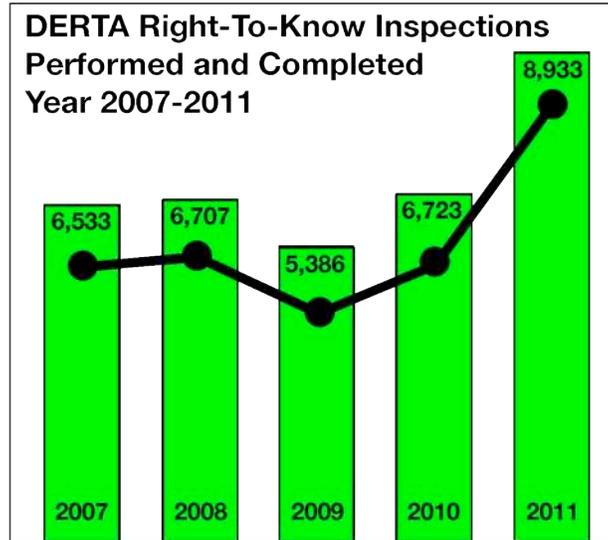


Proper containment ensures public health and safety in the workplace.

Facilities Inspected for Fiscal Year 2007-2011

In Fiscal Year 2011, DERTA completed 8,933 facility inspections. It also identified 764 new facilities that were added to the CFID. In addition, 859 Notices of Violation (NOVs) were issued to facilities for noncompliance with reporting requirements.

The two tables indicate the number of DERTA inspections performed and completed as organized by Community Boards by each borough in Fiscal Year 2010.



Number of Inspections Completed

Community Board	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	99	273	189	326	241
2	111	141	100	320	120
3	45	80	55	94	92
4	77	52	208	77	
5	75	155	481	203	
6	67	134	171	59	
7	31	166	78	328	
8	58	60	131	66	
9	94	45	43	96	
10	74	89	32	82	
11	108	123	61	87	
12	170	117	82	191	
13		93		136	
14		76		40	
15		101			
16		38			
17		135			
18		155			
TOTAL:	1009	2033	1631	2105	453

Total For CFID - 7,231

Total DERTA Inspections - 8,933 including 1,401 inspections for Con Ed Transformers and 301 new facility surveys

Risk Management Plans

According to Local Law 92 of 1993, any facility that stores Extremely Hazardous Substances (EHS) or regulated toxic substances, listed under this law, in quantities exceeding federally determined thresholds are required to file a Risk Management Plan (RMP). According to the federal law, facilities must submit a new RMP at least once every five years.

Currently, the RTK Program has registered 298 active RMP facilities operating within the five boroughs. Since the enactment of this law, many facilities have significantly reduced their inventories of EHS to levels below reportable thresholds resulting in reduced risks to facility workers, emergency response personnel and the community. For the 2011 reporting year, 10 new RMPs have been received, 20 facilities have reported updates

to their plans, and 120 affidavits have been received indicating that no change has been made to their facility's RMP. In addition, added security has been a primary focus at all facilities storing EHS. NYPD's Counter Terrorism Bureau has been working with DERTA in performing risk vulnerability assessments at these facilities.

Once a RMP has been filed, the facilities must submit either an affidavit stating there have been no changes in the facility or its surroundings from the previous calendar year, or they must provide an update of the previously accepted RMP by March 1 of each year that reflects the changes of the previous year. A breakdown of these facilities by borough and Community Boards is shown below.

Facilities Submitting Risk Management Plans

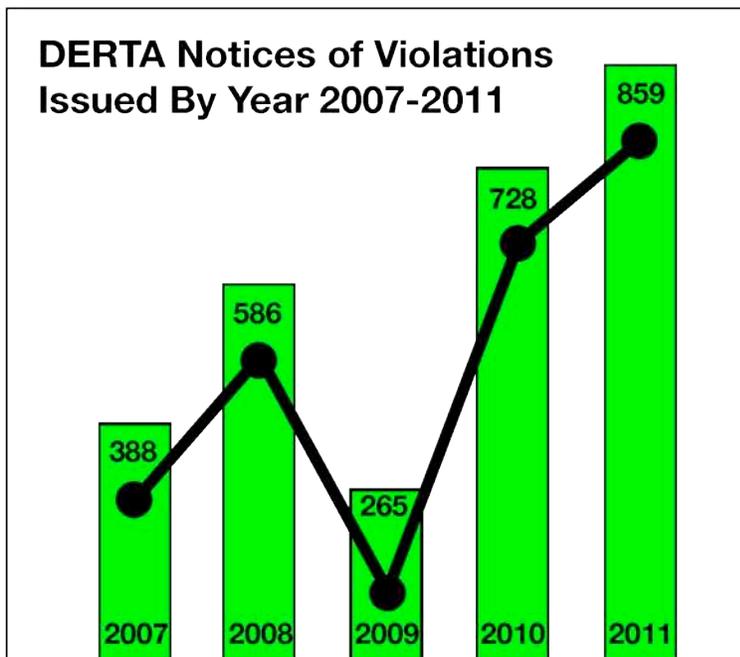
Community Board	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	6	6	46	16	10
2	7	8	5	6	5
3	0	2	3	0	2
4	1	2	18	4	
5	2	5	27	8	
6	3	1	11	2	
7	0	6	6	10	
8	2	0	6	3	
9	1	2	2	1	
10	3	2	0	3	
11	2	1	2	1	
12	2	2	5	7	
13		1		6	
14		2		4	
15		4			
16		1			
17		1			
18		4			
TOTAL	29	50	131	71	17
Total Number of Facilities submitting RMPs - 298					

Notices of Violations Issued

The Right-to-Know Program is authorized to issue Notices of Violation to facilities for failure to submit completed Facility Inventory Forms (FIFs), improper labeling of hazardous substance containers, failure to submit Material Safety Data Sheets (MSDS) and failure to submit a Risk Management Plan (RMP). The majority of violations this year were issued for failure to submit a Facility Inventory Form. A breakdown of violations issued for Fiscal Year 2007-2011 are as follows:

Notices of Violation (NOV) Issued for Fiscal Year 2007-2011

Violations	2007	2008	2009	2010	2011
Failure to File FIFs	367	576	256	714	846
Failure to Submit MSDS	3	0	2	1	0
Failure to Provide Copies of FIF and MSDS to Emergency Responders	2	0	1	0	1
Failure to Meet Labeling Requirements	11	4	2	6	3
Failure to Grant Access	5	4	4	7	7
Failure to File RMP	0	2	0	0	2



In 2011, a total of 859 Notices of Violation were issued to facilities that failed to comply under the Right-to-Know Law. On the right: an accidental spill as a result of an improperly stored hazardous substance found during a RTK inspection. DERTA RTK inspections involve steps to ensure that proper environmental health and safety (EH&S) protocols are met by facilities. DERTA also has the authority to refer these safety issues to various agency jurisdictions, including OSHA.

Emergency Response

Emergency Response Activities

DERTA's HazMat Emergency Response originated in DEP's Bureau of Science and Technology in the 1970s. The team consists of more than 40 responders, known as HazMat Specialists.

DERTA's HazMat Specialists, who possess an exceptionally high level of training in emergency response, are on call 24/7 to respond to reported incidents and perform chemical analyses at response sites. Under the Citywide Incident Management System (CIMS), HazMat emergency responders arrive at a potentially dangerous site to perform chemical identification of hazardous substance. To ensure maximum safety and security, the response team determines zones of delineation and develops strategies on proper containment, mitigation, and decontamination procedures.

Determining an effective mitigation strategy of the site relies heavily on on-site wet chemistry analysis and a sampling of the unknown chemical (in air, water or soil.) This ensures an accurate chemical identification and determines whether or not the hazardous substance can be safely transported off the contaminated site without causing injury or harm to emergency response personnel, the community, and the environment. The chemical identification process also determines the proper containment

protocol required for transport and disposal under strict accordance with the United States Department of Transportation Federal Regulations and Guidelines.

DERTA's HazMat team utilizes the latest advanced equipment and analytical instrumentation, specifically designed for field usage, to accurately identify dangerous agents and hazardous unknown chemicals. The low-level detection equipment allows the team to conduct high-tech environmental monitoring for special events throughout the city, working alongside federal, state and local law enforcement agencies to immediately assess any potential chemical hazard if and when it develops. DERTA also conducts several potential air plume dispersion modeling techniques to perform risk assessments for facilities storing extremely hazardous substances or during chemical, biological, radiological, nuclear and explosive incidents.

DERTA's responsibility to the city ensures that any accidental release or threatened release of a hazardous substance be contained, controlled and remediated without endangering the community and the environment.



Toxic chemical releases are investigated, sampled, and analyzed in DEP's state-of-the-art mobile laboratory.



DERTA Hazmat specialists performing mitigation during a hazardous chemical spill involving mercury. The primary objective during a spill is containment and confinement, and establishing a “hot zone” perimeter minimizes the risks and dangers associated with contamination and exposure.

Enforcement Action

Title 24, Chapter 6 of the New York City Administrative Code, also known as the New York City Hazardous Substances Emergency Response Law (L.L. 42/87) or “Spill Bill,” was enacted to authorize DEP to respond to emergencies or threatened releases of hazardous substances into the environment.

In the event of a hazardous chemical release, the bill authorizes the Commissioner of DEP to issue a Commissioner’s Order to the accountable party. The order stipulates a series of remedial instructions involving mitigation to be performed immediately by licensed contractors within a timely manner, as estimated by DERTA and agreed to by the responsible party. Failure or a refusal to comply with the Commissioner’s Order results in the issuance of a Notice of Violation (NOV) by DERTA. A failure to notify DEP of a hazardous substance release also incurs the issuance of a NOV.

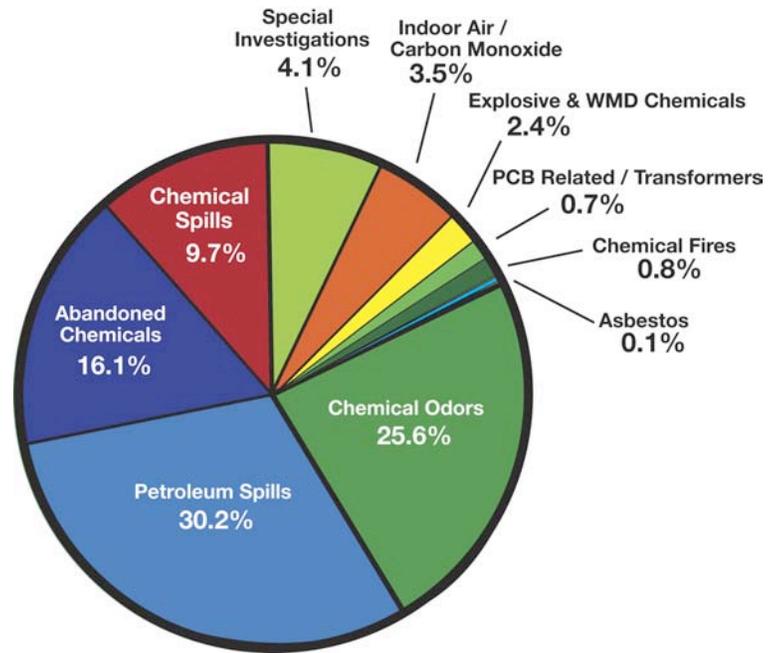
The regulation of hazardous substances under the Right-to-Know Law is archived in DERTA’s Citywide Facility Inventory Database (CFID) under the Right-to-Know Program. The vast enriched database lists the quantities in pounds, categorizes the storage classes and outlines the potential dangers of hazardous substances stored within facilities. The information submitted by the facilities is recorded on a documents referred to as Facility Inventory Forms (FIFs). Facilities are required by law to either submit their FIFs by hard copy or electronically online by no later than March 1st of every year.

During Fiscal Year 2011, DERTA issued 16 NOVs for failure to comply with the 25 Commissioner’s Orders issued.

Emergency Response

Hazardous Materials Responses by Incident Type

DERTA responded to 2,123 incidents of hazardous material releases in Fiscal Year 2011. Of these incidents, 25.6 percent were responses to reports of chemical odors; 30.2 percent were petroleum spills; 16.1 percent were abandoned chemicals 9.7 percent were responses to chemical spills and 4.1 percent were responses to special investigations.



Hazardous Materials Responses by Incident

Responses: Fiscal '11 (July 2010 – June 2011)

Category	July '10	Aug '10	Sep '10	Oct '10	Nov '10	Dec '10
Abandoned Chemicals	40	36	32	21	27	23
Chemical Odors	61	49	58	55	42	31
Chemical Fires	2	1	2	2	0	0
Chemical Spills	24	22	14	15	17	20
Explosive & WMD Chemicals	1	2	1	14	3	2
Petroleum Spills	80	63	54	36	41	41
PCB Related/Transformers	2	1	2	1	3	0
Indoor Air/Carbon Monoxide	11	6	4	9	8	8
Special Investigations	10	13	18	21	18	19
Asbestos	0	0	0	0	0	0
Total For Month:	231	193	185	174	159	144

Category	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Total FY2011
Abandoned Chemicals	22	22	20	31	29	39	342
Chemical Odors	28	34	38	42	39	66	543
Chemical Fires	2	2	1	1	2	2	17
Chemical Spills	11	12	17	24	15	15	206
Explosive & WMD Chemicals	1	1	4	3	0	0	32
Petroleum Spills	44	42	38	66	65	70	640
PCB Related/Transformers	1	1	1	2	0	1	15
Indoor Air/Carbon Monoxide	36	12	4	3	6	7	114
Special Investigations	32	26	18	11	14	12	212
Asbestos	0	0	0	1	1	0	2
Total For Month:	177	152	141	184	171	212	2,123

Hazardous Materials Responses by Incident Type

The following table shows the number of reported HazMat incidents as reported by New York City's 59 Community Boards. Manhattan reported 548 incidents, followed by Brooklyn with 523, Queens with 521, Bronx with 276 and Staten Island with 144.

Number of HazMat Emergency Incidents by Community Board

Community Board	FY2011 Incidents	FY2011 % Borough Total	FY2011 % Citywide Total
Bronx			
1	20	6.8	0.9
2	21	7.2	1.0
3	16	5.5	0.8
4	23	7.8	1.1
5	16	5.5	0.8
6	15	5.1	0.7
7	29	9.9	1.4
8	23	7.8	1.1
9	15	5.1	0.7
10	31	10.6	1.5
11	27	9.2	1.3
12	40	13.7	1.9
Brooklyn			
1	64	11.8	3.0
2	47	8.7	2.2
3	39	7.2	1.8
4	22	4.1	1.0
5	21	3.9	1.0
6	51	9.4	2.4
7	30	5.5	1.4
8	13	2.4	0.6
9	13	2.4	0.6
10	29	5.4	1.4
11	27	5.0	1.3
12	38	7.0	1.8
13	17	3.1	0.8
14	17	3.1	0.8
15	25	4.6	1.2
16	15	2.8	0.7
17	30	5.5	1.4
18	25	4.6	1.2

Community Board	FY2011 Incidents	FY2011 % Borough Total	FY2011 % Citywide Total
Manhattan			
1	30	5.2	1.4
2	46	8.0	2.2
3	46	8.0	2.2
4	60	10.4	2.8
5	62	10.8	2.9
6	48	8.3	2.3
7	62	10.8	2.9
8	83	14.4	3.9
9	15	2.6	0.7
10	31	5.4	1.5
11	30	5.2	1.4
12	35	6.1	1.6
Queens			
1	93	16.8	4.4
2	31	5.6	1.5
3	19	3.4	0.9
4	14	2.5	0.7
5	58	10.5	2.7
6	16	3.5	0.9
7	53	9.6	2.5
8	35	6.3	1.6
9	34	6.2	1.6
10	21	3.8	1.0
11	29	5.3	1.4
12	56	10.1	2.6
13	37	6.7	1.7
14	25	4.5	1.2
Staten Island			
1	68	44.2	3.2
2	31	20.1	1.5
3	45	29.2	2.1

Public Safety and Cost Reduction Mitigation Initiative

Mitigation and Removal

As a progressive measure in the mitigation and removal of hazardous waste throughout the five boroughs, DERTA recently formulated and developed its own tactical plan in dealing with the removal of abandoned hazardous substances off-site as a cost cutting strategic alternative, if and when a responsible party is unidentifiable or unknown.

With more than 2,700 response incidents per year and counting, nearly 450 (16.7%) of these incidents involve abandoned chemicals. Under routine circumstances, these substances are removed and transported by certified environmental contractors. The process, which incurs thousands of dollars in cost, involves a bidding-out process where time, quantity and distance are calculated by the vendor to set a price to be agreed upon by DERTA with specific terms set forth to ensure a safe and secure pickup.

In certain cases however, where the quantity and volume of the abandoned substance meets the threshold standards within the plan, DERTA puts their hazardous waste management skills to use by performing the removal and transportation of the abandoned hazardous substance. The substance is overpacked by DERTA and safely transported to a secure location where it can be stored and bid out in a relatively safe and timely manner. This, in turn, avoids the lingering effects of pickups during off-hour late nights, weekends and holidays, which are exorbitant contributing factors in the determination

of price quotes. The plan also considerably reduces the dependency of overnight (third-party) security personnel and, most importantly, expedites the removal of hazardous substances from the streets to preserve a fixture of public health and safety.

In a typical abandoned chemical response scenario, there are three contributing factors that determine whether or not the hazardous substance removal will be undertaken by an environmental contractor. Prior to this, a preliminary stage involves the sampling, characterization and identification of the abandoned material on-site through a combination of instrumentation readings and wet chemistry analyses by DERTA responders. Conclusively, if (i) the material is deemed to be a petroleum-based product, the New York State Department of Environmental Conservation (DEC) is notified for the removal; (ii) if the material is deemed to exhibit non-hazardous properties, the Department of Sanitation is notified for the removal; and (iii) if the material is deemed to exhibit hazardous properties and characteristics, the removal, mitigation and transport of the material will be the sole responsibility of DERTA, provided that allowable storage quantities are not exceeded. Once the material is contained and secure, DERTA determines the strategies involved in its removal. With the cost reduction mitigation initiative as an option, DERTA continues to raise the bar in efficiency and maximizes the safety and health of New York City.



Trained DERTA responders overpack a fifty-five gallon drum containing a hazardous substance.

Toxic Chemical Releases

In accordance with §313 of Title III of the federal Superfund Amendments and Reauthorization Act (SARA), companies and facilities within New York City must file their Toxic Release Inventory (TRI) data with the New York State Department of Environmental Conservation. The most current TRI data available is for fiscal year 2009.

United States Environmental Protection Agency receives information on chemical emission reports submitted by facilities under the federal SARA Title III law. SARA Title III requires the reporting of annual releases of toxic chemicals to the air, water and land. Section 313 of that law mandates annual release reporting for more than 650 chemicals. These reports are due to the New York State Department of Environmental Conservation no later than July 1st of each year and cover activities for the previous calendar year.

TRI data presented in this section refer to 25 New York City facilities that have reported their releases to USEPA, and only address air emissions that account for the majority of releases.

Facilities meeting the following criteria are required to submit TRI data:

- North American Industry Classification System (NAICS) code ranges from sections 31 through 33. The NAICS code ranges refer to facilities in the manufacturing and industrial sections. Starting in 1998, power-generating facilities were also required to report
- Ten or more full-time employees
- Manufacture or process 25,000 pounds per year or otherwise use 10,000 pounds of a listed toxic chemical during the calendar year.

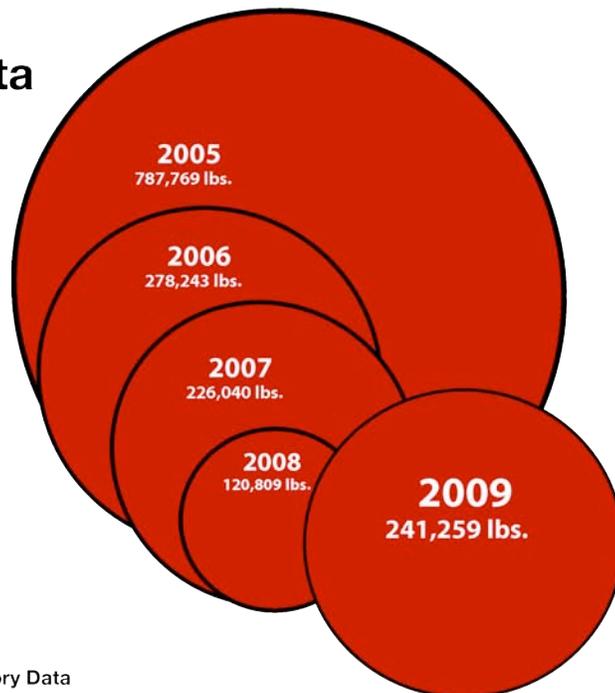
The top five toxic chemicals released in New York City by descending order are ammonia, chlorodifluoromethane, sulfuric acid, trichloroethylene, and tetrachloroethylene (perc). These substances represent more than 93 percent of the total reported releases by weight. Ammonia alone represents 38 percent of the total reported releases.

2009 Toxic Release Data Total Releases To Air

Total releases of toxic chemicals into the air for 2009 were 241,259 pounds, which was nearly twice the amount reported in 2008, but less than half in 2005

The top five chemicals released, in descending order, are ammonia, chlorodifluoromethane, sulfuric acid, trichloroethylene, and tetrachloroethylene (perc)

Data reported by 25 New York City facilities in the industrial and manufacturing sectors that report annually to the USEPA, which include power generating facilities



Source: EPA New York State Toxic Release Inventory Data

These releases were from facilities in the following industrial sectors: electric services (61.4% of the total releases), refrigerant merchant wholesalers (27%), petroleum bulk stations and terminals (4.3%), metal coating and allied services (3.6%), metal stampings, unfinished, manufacturing (3.3%), paint and coating manufacturing (0.3%)

Releases from facilities in the electric services industry accounted for all the sulfuric acid and the ammonia emissions. Metal coating and allied services accounted for all of the trichloroethylene releases. Metal stampings, unfinished, manufacturing accounted for all tetrachloroethylene releases.

In analyzing the TRI release data in air, it is important to understand that the data does not represent the total value of toxic air emissions from the 25 reporting facilities alone in New York City. Under the minimum criteria required for reporting, there are many other types of facilities in the city that do not meet the these requirements under SARA Title III, §313, but when their emissions are cumulatively added, they are a significant source and

contributing factor in toxic air emissions. For example, dry cleaners, an industry that is not factored into the TRI data as an industry whole, represents a significant source for toxic air emissions. There are currently 913 dry-cleaning facilities operating in the CFID that utilize a hazardous substance commonly referred to as perc (chemical name tetrachloroethylene or perchloroethylene;) although perc is not a chemical listed in the EHS list, it is still considered to be a probable carcinogen. Due to the relatively small operational size of a typical dry cleaning facility (less than 10 employees,) the toxic emissions generated by perc by each dry cleaning facility tends to fall way below the threshold for TRI data reporting. As a result, dry cleaners are generally exempt from filing TRI data, and PERC, therefore, is generally unaccounted for in the release figures.

The list on pages 17 - 18 shows the release figures in air, in pounds per year, for all TRI substances by Community Boards.



An acid bath located within a plating facility during a RTK inspection containing hazardous inorganic salts.

Toxic Chemical Releases

2009 Toxic Release Inventory Data in New York City by Community Board (CB)

Based on 2009 Section 313 Data Submitted to the State Emergency Response Commission

CB	Chemical Name	Release To Air (Pounds Per Year)
B01	1,2,4-Trimethylbenzene (1 detail record)	116.00
	Benzo(G,H,I)Perylene (1 detail record)	0.01
	Lead Compounds (1 detail record)	0.51
	Naphthalene (2 detail records)	507.00
	Polycyclic Aromatic Compounds (2 detail records)	1.27
	Summary For Community Board B01 (7 detail records)	624.79
	B09	1,2,4-Trimethylbenzene (1 detail record)
	Summary For Community Board B09 (1 detail record)	31.20
Total For Bronx (8 detail records)		655.99
K01	1,2,4-Trimethylbenzene (3 detail records)	259.58
	Benzene (3 detail records)	855.97
	Ethylbenzene (3 detail records)	120.35
	Naphthalene (1 detail records)	58.00
	N-Hexane (3 detail records)	2,776.39
	Polycyclic Aromatic Compounds (1 detail record)	0.52
	Potassium Bromate (1 detail record)	250.00
	Styrene (1 detail record)	1.00
	Toluene (3 detail records)	1,847.06
	Trichloroethylene (1 detail record)	8,613.00
	Xylene (Mixed Isomers) (3 detail records)	1072.45
	Summary for Community Board K01 (23 detail records)	15,854.32
	K02	Ammonia (1 detail record)
Mercury Compounds (1 detail record)		33.00
Polycyclic Aromatic Compounds (1 detail record)		129.60
Summary For Community Board K02 (3 detail records)		5355.60
K05	Lead Compounds (1 detail record)	75.91
	Methanol (1 detail record)	5.00
	N-Butyl Alcohol (1 detail record)	5.00
	Methyl Isobutyl Ketone (1 detail record)	5.00
	Toluene (1 detail record)	5.00
	Xylene (Mixed Isomers) (1 detail record)	5.00
	Summary For Community Board K05 (6 detail records)	100.91
K06	1,2,4-Trimethylbenzene (1 detail record)	59.00
	Benzo(G,H,I)Perylene (1 detail record)	0.02
	Lead (1 detail record)	0.18
	Naphthalene (1 detail record)	11.00
	Polycyclic Aromatic Compounds (1 detail record)	2.17
	Summary For Community Board K06 (5 detail records)	72.37

2009 Toxic Release Inventory Data (Continued)

C. B.	Chemical Name	Release To Air (Pounds Per Year)
K07	1,2,4-Trimethylbenzene (2 detail records)	75.00
	Lead (1 detail record)	0.06
	Naphthalene (2 detail records)	18.00
	N-Hexane (2 detail records)	0.70
	Polycyclic Aromatic Compounds (1 detail record)	15.00
	Xylene (Mixed Isomers) (2 detail records)	152.00
	Summary For Community Board K07 (10 detail records)	260.76
K17	1,2,4-Trimethylbenzene (1 detail record)	363.00
	Toluene (1 detail record)	5.00
	Xylene (Mixed Isomers) (1 detail record)	222.00
	Summary for Community Board K17 (3 detail records)	590.00
Total For Brooklyn (50 detail records)		22,233.96
M06	Ammonia (1 detail record)	61,800.00
	Benzo (G,H,I)Perylene (1 detail record)	0.08
	Dioxin And Dioxin-Like Compounds (1 detail record)	0.05
	Polycyclic Aromatic Compounds (1 detail record)	0.39
	Summary for Community Board M06 (4 detail records)	61,800.52
Total For Manhattan (4 detail records)		61,800.52
Q01	1,2,4-Trimethylbenzene (1 detail record)	124.21
	Ammonia (1 detail record)	23,545.00
	Benzene (1 detail record)	52.54
	Benzo(G,H,I)Perylene (3 detail records)	0.19
	Chlorodifluoromethane (1 detail record)	62,030.00
	Dichlorodifluoromethane (1 detail record)	2,111.00
	Dioxin And Dioxin-Like Compounds (3 detail records)	1.03
	Ethylbenzene (1 detail record)	71.88
	Lead (1 detail record)	26.00
	Lead Compunds (2 detail records)	145.83
	Naphthalene (3 detail records)	272.51
	Polycyclic Aromatic Compounds (3 detail records)	36.27
	Sulfuric Acid (1994 and after "Acid Aerosols" only) (1 detail records)	57,005.00
	Toluene (1 detail record)	1,442.07
	Trihlorofluoromethane (1 detail record)	1,200.00
	Xylene (Mixed Isomers) (1 detail record)	630.12
	Summary For Community Board Q01 (25 detail records)	148,693.66
Q12	Tetrachloroethylene (1 detail record)	7,940.00
	Summary For Community Board Q12 (1 detail record)	7,940.00
Q13	Ethylbenzene (1 detail record)	30.97
	Naphthalene (1 detail record)	103.65
	Summary For Community Board Q13 (2 detail records)	134.62
Total For Queens (28 detail records)		156,768.28
Citywide Total:		241,458.75

Administrative Information

Response Times and Personnel Costs for FY2011

Agency	Div/Program	Time (min)	Emergency Personnel			Subtotal	Totals		
			No.	Title	Salary				
DEP	Hazardous Materials Emergency Response	5-10	1	Executive Director	135,000	135,000	2,849,187		
			2	Deputy Directors	110,840	221,680			
			6	WMD/Sr. HazMat Specialists	81,913	491,477			
			30	WMD/HazMat Specialists	55,027	1,650,824			
			6	HazMat Techs	34,518	207,108			
			1	Special Officer	47,093	47,093			
			1	Supervisor Electrician	96,005	96,005			
			NYPD	Emergency Service Unit	24	1		Deputy Chief	199,354
1	Deputy Inspector	180,979				180,979			
6	Captains	172,558				1,035,348			
20	Lieutenants	133,923				2,678,460			
44	Sergeants	114,866				5,054,104			
262	Detectives	101,759				26,660,858			
91	Police Officers	90,384				8,224,944			
COBRA Trained Officers	30	20,209		COBRA Trained Officers	90,384	1,826,570,256			
FDNY	Fire Unit	4-5		1	Assistant Chief	184,000	184,000	335,345,400	
				2	Deputy Asst Chiefs	180,000	360,000		
			9	Deputy Chiefs	179,000	1,611,000			
			57	Battalion Chiefs	161,000	9,177,000			
			176	Captains	125,500	22,088,000			
			439	Lieutenants	110,300	48,421,700			
			2,569	Firefighters	90,300	231,980,700			
	Medical Unit	5-10	8	Deputy Chiefs	78,500	628,000			
			15	Captains	52,000	780,000			
			25	Lieutenants	50,000	1,250,000			
			180	Paramedics	50,500	9,090,000			
			250	EMTs	39,100	9,775,000			
			DOHMH	Office of Environmental Investigations and Office if Radiological Health	30-45	6	Managers		111,280
4	City Research Scientist	79,430	317,719						
2	Associate Staff Analyst	76,017	152,033						
1	PH Sanitarian II	52,568	52,568						
1	Admin. Staff Analyst	77,761	77,761						
1	City Research Scientist	81,903	81,903						
2	Scientists	65,698	131,396						
2	Associate PH Sanitarians	67,698	135,396						
5	PH Sanitarian II	52,581	262,905						
DSNY	Environmental Police Unit	10-40	2	Lieutenants	93,134	186,268	741,641		
			7	Envir. Police Officers	69,339	485,373			
			1	Assistant Chemist	70,000	70,000			
OEM	Office of Emergency Management	30	20	Responders	89,519	1,790,373	1,790,373		

Budgets were submitted by individual agencies

Total: \$2,213,210,264

DERTA Emergency Response Protocols



Clockwise from the top: DERTA donned in level B attire during a training drill simulation; a decontamination procedure also known as “decon” being applied when leaving a “hot zone”; a typical wet chemistry spot analysis performed for chemical identification; removal of a hazardous substance into an overpack drum.



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DEP also would like to thank the following:

- All emergency response personnel for their continued efforts to protect the environment and the health and safety of New York City.
 - Agency coordinators who have provided information on emergency response included in this report: the Division of Environmental Response and Technical Assessment, the New York City Police Department, the New York City Fire Department, the New York City Department of Health & Mental Hygiene, the New York City Department of Sanitation, the New York City Office of Emergency Management, and the New York State Emergency Response Commission.
 - New York City-based facilities in compliance with the Right-To-Know law for the reporting and submission of their chemical inventory data, which allows DEP to compile the Citywide Facility Inventory Database.
 - All concerned individuals who report unsafe act, storage or release that involves the spread of hazardous substances into our environment.
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