



HAZARDOUS MATERIALS MANAGEMENT IN NEW YORK CITY

2016 Annual Report

NYC
Environmental
Protection

Bill de Blasio
Mayor

Vincent Sapienza, P.E.
Acting Commissioner



October 1, 2016

I am pleased to present the New York City Department of Environmental Protection's (DEP) Hazardous Materials Management Annual Report for 2016. You will find data from fiscal year 2016 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 other release of hazardous substances.

In the past year, DEP performed more than 11,178 inspections of facilities that store hazardous substances to ensure compliance under the Right-to-Know Law.

To learn more about DEP's Right-to-Know Program, please visit our website at nyc.gov/dep, or contact the Right-to-Know Program by 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.

We all need to work together to keep our communities safe. So if you see or hear about materials that could be hazardous, please contact 311.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Vincent Sapienza".

Vincent Sapienza, P.E.
Acting 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 gives the New York City Department of Environmental Protection (DEP) the authority 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.

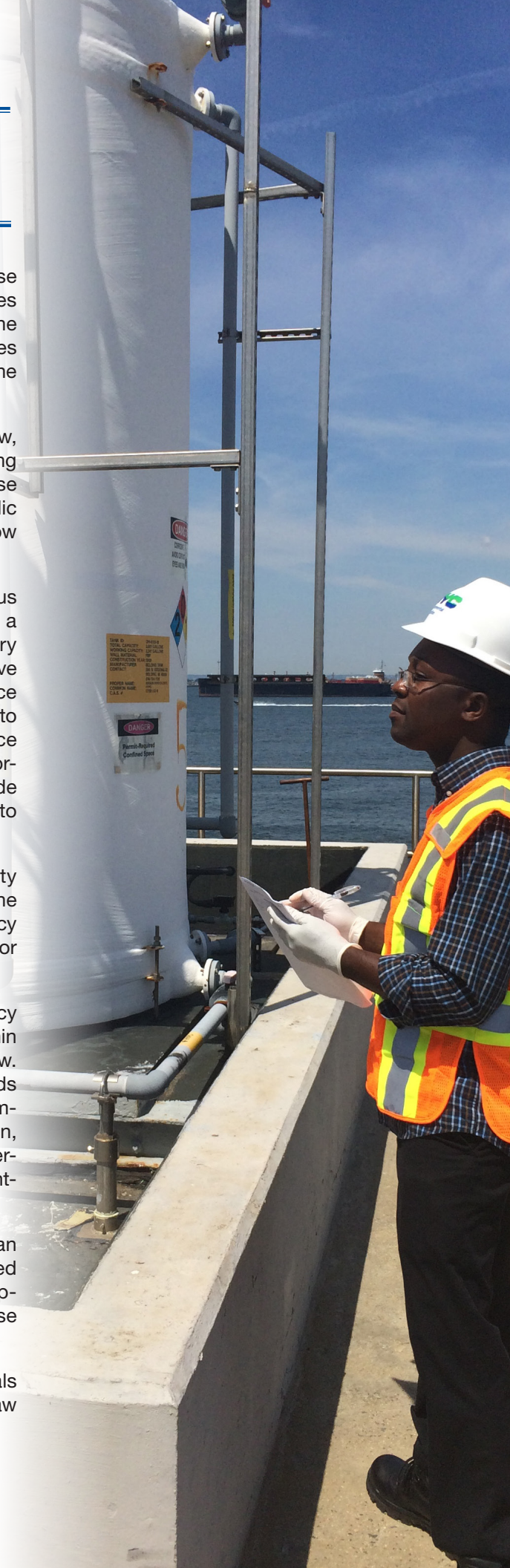
The RTK Program manages the reporting and storage of hazardous substances by requiring businesses and facilities to annually file a report detailing the quantity, location, and chemical nature of every hazardous substance stored within their facilities throughout the five boroughs. The program also grants DEP the authority to enforce action by issuing Commissioner’s Orders and Notices of Violation to help ensure safety and stability in regulation of hazardous substance 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 Citywide Facility Inventory Database is to enhance preparedness and to minimize the number of hazardous substance releases that may 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’s 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 substance releases. The HazMat responders are comprised of chemists and engineers who possess the formal education, technical and tactical expertise required to effectively carry out emergency responses collectively by enforcing the Spill Bill and the Right-to-Know Law.

All the information for DERTA’s HazMat responses is archived in an agency-wide 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 2016 Annual Report according to §24-715 of Local Law 26 of 1988.



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 Program. Facility Inventory Forms (FIF) 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 11,178 reporting facilities within New York City.

DERTA uses its online system, Tier II, to simplify the filing process for facilities reporting under the Right-to-Know Program.

The CFID data is collected under both the New York City Community Right-to-Know Law (RTK) and Title III of the Superfund Amendments and Reauthorization Act (SARA). During fiscal year 2016, there was an addition of 662 new facilities entered into the

database, 144 facilities became exempt from filing, and 332 went out of business.

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

- Facility Inventory Forms
- Safety Data Sheet (SDS) 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.

The information contained within the CFID is often used by the New York City Police Department, the Fire Department of New York, and the New York City Office

Facilities in CFID Reporting Hazardous Substances by Community Board

Community Board	Number Of Facilities In CFID				
	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	158	317	517	398	337
2	122	193	253	344	179
3	56	129	220	131	161
4	141	75	355	148	
5	96	216	880	216	
6	104	167	375	101	
7	85	179	203	353	
8	102	78	295	144	
9	121	79	102	136	
10	109	117	96	128	
11	133	157	140	123	
12	194	144	187	260	
13		108		219	
14		126		89	
15		134			
16		68			
17		159			
18		221			
TOTAL:	1,421	2,667	3,623	2,790	677

of Emergency Management. The CFID, after a comprehensive review process, may provide information deemed suitable based upon internal policy, to elected officials, the public, and the city's Local Emergency Planning Committee to further increase safety awareness.

Extremely Hazardous Substances (Top 20)

Of the 3,000 hazardous substances regulated by the New York City Community Right-to-Know law, only 355 are considered to be Extremely Hazardous Substances (EHS). The chemicals were determined by EPA to be EHS based on their toxicity, manifested by their potential to cause death or serious health effects. Each substance was assigned a Threshold Planning Quantity by EPA that triggers the need to report under §302 of SARA Title III. The EHS list and its threshold planning quantities are intended to help communities focus on the substances and facilities of the most immediate concern for the protection of public safety, and for emergency planning and response.

It is important to note that the use of EHS can be an integral part of a business. For example, the telecommunications industry in New York City uses an EHS, sulfuric acid contained in batteries which comprise the

back-up power systems necessary in the case of electrical power failure. There is no community exposure to sulfuric acid in this case unless there is an accidental release. A community may be exposed to chemicals utilized by businesses that provide services we all use on a regular basis.

The DEP RTK inspection and enforcement program inspects facilities that uses EHSs to ensure proper handling and the reduction of risks to facility workers and the public. When these chemicals are used, stored, and handled properly, community exposure to EHS is minimized.

Furthermore, facilities which use and store EHS at or above the Threshold Planning Quantity are required to submit a Risk Management Plan (RMP) to DEP.

The table below depicts the 20 most frequently reported extremely hazardous substances in New York City. An EHS may be reported more than once by a facility, therefore the frequency indicates not the number of facilities, but the number of times a substance is reported.

Most Frequently Reported Extremely Hazardous Substances - Top 20

Rank	CAS Number	Chemical Name	Frequency Reported
1	7664-93-9	SULFURIC ACID	10,361
2	50-00-0	FORMALDEHYDE	1,094
3	7664-39-3	HYDROFLUORIC ACID	530
4	108-95-2	PHENOL	374
5	7722-84-1	HYDROGEN PEROXIDE	371
6	7664-41-7	AMMONIA	246
7	26628-22-8	SODIUM AZIDE	231
8	108-05-4	VINYL ACETATE	219
9	7697-37-2	NITRIC ACID	182
10	123-31-9	HYDROQUINONE	178
11	67-66-3	CHLOROFORM	154
12	7647-01-0	HYDROCHLORIC ACID	127
13	151-50-8	POTASSIUM CYANIDE	98
14	79-06-1	ACRYLAMIDE	88
15	143-33-9	SODIUM CYANIDE	76
16	7487-94-7	MERCURIC CHLORIDE	69
17	75-56-9	PROPYLENE OXIDE	68
18	129-00-0	PYRENE	61
19	108-91-8	CYCLOHEXYLAMINE	55
20	62-53-3	ANILINE	48

Top Five Industries Reporting to RTK by Borough

The “North American Industry Classification System,” or NAICS code, is a number assigned by the Federal government to businesses, which identifies the industrial category to which any given business belongs.

More than half of all facilities in the CFID are industries that are identified by the following five NAICS Codes:

- 517210 - Cellular and Other Wireless Telecommunications,
- 811111 - General Automotive Repair,
- 811121 - Automotive Body, Paint and Interior Repair & Maintenance,
- 812320 - Dry Cleaning Services, and
- 517110 - Wired Telecommunications Carriers.

The number of facilities in the CFID with these NAICS codes is shown in the table below. The total number of reporting facilities in CFID is 11,718 as of June 30, 2016. The table below indicates that the 7,038 facilities in the top five reporting industries encompass 64% of the CFID.

Cellular and Other Wireless Telecommunications (39%) and General Automotive Repair (8%) are the top two industries filing with the Right-To-Know Program, followed by Automotive Body, Paint and Interior Repair & Maintenance, Dry Cleaning Services, and Wired Telecommunications Carriers.

Approximately 29% of the 7,038 facilities comprising the top five NAICS codes are located in Manhattan, and most of them are Cellular and Other Wireless Telecommunications. Queens contains the second highest number of facilities in these categories with 26%, followed by Brooklyn with 25%. The Bronx and Staten Island have 14% and 6% of the facilities in these NAICS codes respectively.

Top Five Industries in CFID Reporting to RTK by Borough

NAICS Code	Facility Type	Borough					Total by NAICS	% of CFID
		Bronx	Brooklyn	Manhattan	Queens	Staten Island		
517210	Cellular and Other Wireless Telecommunications	496	1,044	1,530	974	219	4,263	39%
811111	General Automotive Repair	190	250	38	285	78	841	8%
811121	Automotive Body, Paint and Interior Repair & Maintenance	149	228	28	295	65	765	7%
812320	Dry Cleaning Services	115	220	162	196	51	744	6%
517110	Wired Telecommunications Carriers	19	40	306	43	17	425	4%
Total Number of Facilities		969	1782	2064	1,793	430	7,038	64%
Borough as percent of City		14%	25%	29%	26%	6%		

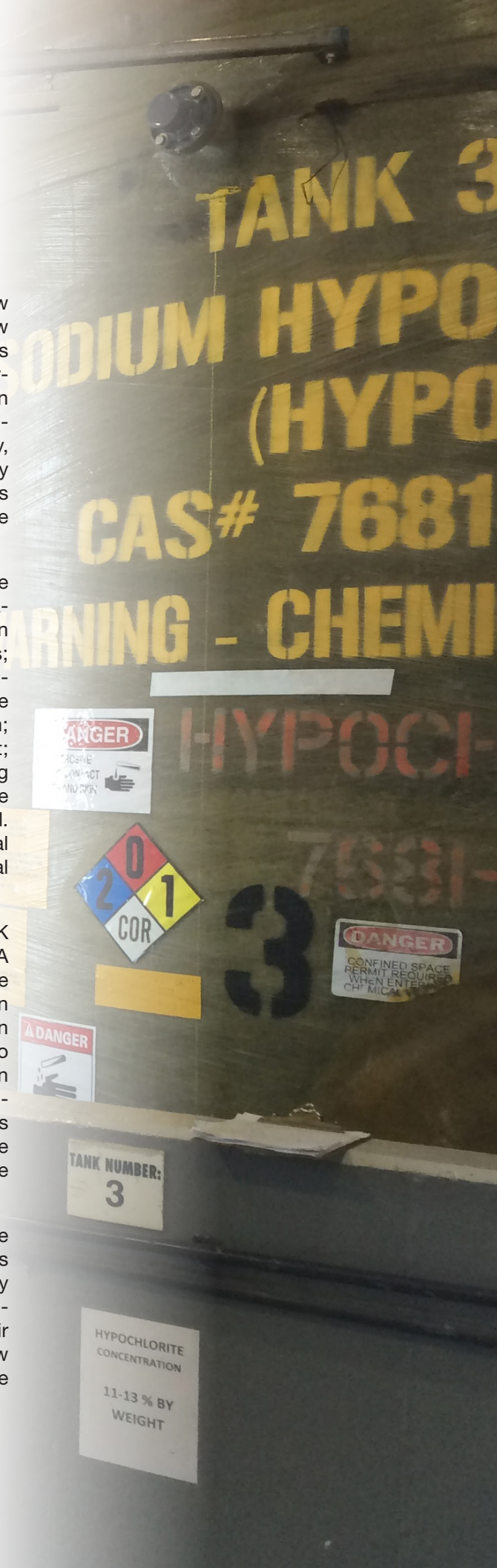
FACILITY RIGHT-TO-KNOW (RTK) INSPECTIONS

With a total of 1,1178 facilities reporting annually, the Right-to-Know program grants DEP the jurisdiction to enforce the Right-to-Know Law by conducting facility inspections on a routinely scheduled basis throughout the city. The inspections involve a full site inventory analysis that includes an assessment in the proper storage and segregation of hazardous substances by class. Class is usually related to chemical compatibility and hazardous characteristics such as corrosivity, flammability and toxicity. Scheduled inspections performed by DERTA personnel confirm the quantities of hazardous substances reported by the facility in the Citywide Facility Inventory Database (CFID).

If the facility is located in a flood zone, in addition to the safe storage principles, its also recommended: the facility stores chemicals in locations less likely to be flooded; elevates chemicals off the ground when possible; locks and secures storage cabinets to fixed structures; keeps caps and lids on all chemical containers tightly closed to prevent water from entering containers in case of flooding; keeps the number and quantity of stored chemicals to a reasonable minimum; uses concrete or fixed solid structures as secondary containment; securely anchors above-ground storage tanks and all tanks (including underground) be tightly capped and vented, or other openings that are not liquid-tight must be extended above the 100-year floodplain level. Storing and processing of water reactive chemicals or any chemical that may become flammable, explosive, or pose other environmental danger in case of flooding are prohibited in the 100-year floodplain.

There are many facilities that may be required to comply with the RTK Law. However they may not be aware of that requirement. DERTA targets new facilities by searching for specific trades using phone directories or lists of facilities compiled by specific North American Industry Classification System that may be procured from information groups. Oftentimes, citizen complaints to 311 may lead DERTA to businesses that are required to file but have not done so as of yet. In those cases, an inspection of the facility is performed and the business is given an allotted time to file under the RTK law. New facilities are also identified by performing “survey” inspections. These are inspections performed on businesses that are not in the CFID but are adjacent to or on the same block as the routine facility inspections.

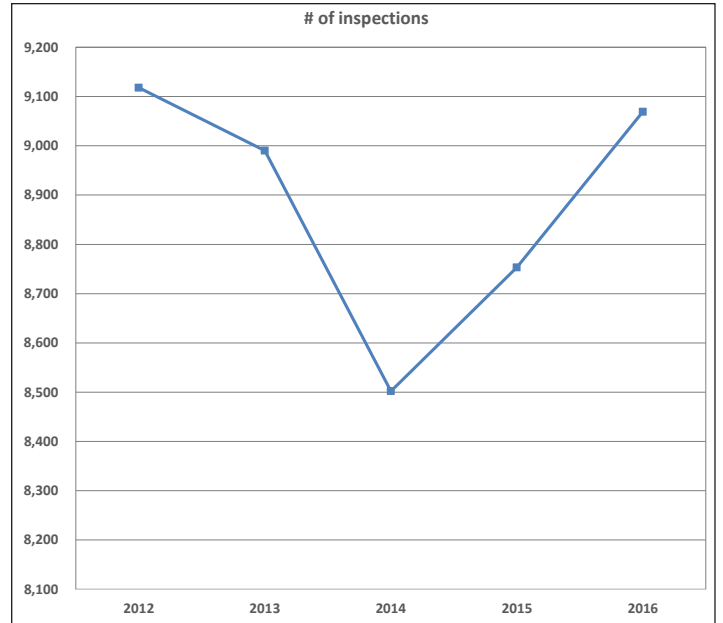
During an emergency response, DERTA also conducts immediate (unscheduled), RTK inspections of facilities responsible for hazardous substance releases involving odors or spills. These inspections may result in the finding of hazardous substances that have been unreported by the facility. Such findings require the facilities to file their stored substances under the RTK Law, and these findings allow DERTA to take action by issuing a Commissioner’s Order and a Notice of Violation if a facility fails to comply with the order.



Facilities Inspected for Fiscal Year 2012-2016

In Fiscal Year 2016, DERTA completed 9,069 facility inspections and identified 662 new facilities that were added to the CFID. DERTA issued 555 Notices of Violation to facilities for non-compliance with reporting requirements.

The table below indicates the number of DERTA inspections performed and completed, as organized by Community Boards by each borough in Fiscal Year 2016.



Inspections Completed in FY2016

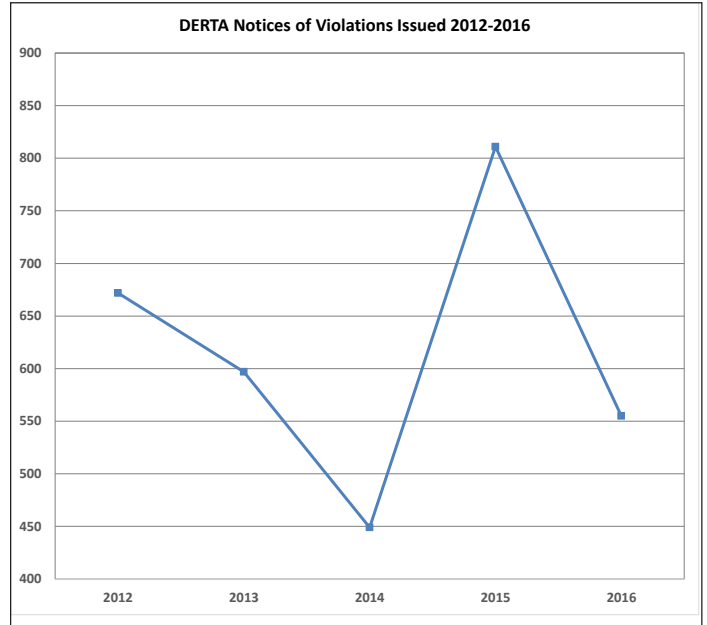
Community Board	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	138	369	165	339	239
2	133	130	121	378	81
3	60	68	43	104	68
4	111	63	228	86	
5	83	162	665	178	
6	80	127	223	54	
7	42	205	92	314	
8	63	61	173	85	
9	111	42	45	116	
10	92	87	40	82	
11	101	129	51	74	
12	176	131	80	226	
13		80		148	
14		58		47	
15		91			
16		56			
17		131			
18		160			
TOTAL	1,190	2,150	1,926	2,231	388

Total for CFID: 7,885

Total for City: 9,069 including 1,184 inspections for Con Ed Transformers

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, improper labeling of hazardous substance containers, failure to submit Safety Data Sheets (SDS), and failure to submit a Risk Management Plan. The majority of violations this year were issued for failure to submit a Facility Inventory Form. A breakdown of violations issued for Fiscal Year 2012-2016 is shown below:



Notices of Violation Issued for Fiscal Year 2012-2016

Violations	Number Of Violations Issued				
	2012	2013	2014	2015	2016
Failure to File FIF	652	582	425	774	543
Failure to submit SDS	1	3	1	0	1
Failure to provide copies of FIF&SDS to emergency responders	7	4	4	3	0
Failure to Meet Labeling Requirement	4	6	10	27	0
Failure to Grant Access	5	2	9	7	10
Failure to File RMP	3	0	0	0	1
Total Violations For Fiscal Year:	672	597	449	811	555

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 334 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 2015 reporting year, 13 new RMPs have been received, 66 facilities have reported updates to their plans, and 147 affidavits have been received indicating that no change has been made to their facility's RMP.

Once an 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 from 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	Total
1	8	6	42	15	10	81
2	6	13	7	4	6	36
3	0	2	3	0	4	9
4	2	2	19	4		27
5	2	7	41	10		60
6	2	1	13	4		20
7	1	7	11	12		31
8	2	0	5	2		9
9	1	1	2	1		5
10	4	2	0	3		9
11	2	2	3	1		8
12	2	2	6	6		16
13		0		6		6
14		2		4		6
15		4				4
16		1				1
17		1				1
18		5				5
Subtotal	32	58	152	72	20	334

EMERGENCY RESPONSE

Emergency Response Activities

PERTA's HazMat Emergency Response originated in DEP's Bureau of Science and Technology in the 1970s. The team consists of specially trained responders known as HazMat Specialists.

PERTA'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, HazMat emergency responders arrive at a potentially dangerous site to perform chemical identification of hazardous substances. To ensure maximum safety and security, the response team determines zones of delineation and develops strategies on proper containment, mitigation, disposal, 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 technique 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.

PERTA's HazMat team utilizes the latest advanced equipment and analytical instruments, specifically designed for field use, to 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. PERTA also conducts air plume dispersion modeling to perform risk assessments.

PERTA'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.



EMERGENCY RESPONSE (Continued)

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 an 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 Notice of Violation.

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 document referred to as the Facility Inventory Form. Facilities are required by law to either submit their Facility Inventory Form by hard copy or electronically online by no later than March 1 of every year.

During Fiscal Year 2016, DERTA issued 15 Commissioner’s Orders of which, 3 NOVs were served for failure to comply; and 2 NOVs were issued for failure to notify.

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 removal of abandoned hazardous substances off-site as a cost cutting strategic alternative, if and when a responsible party is unidentifiable or unknown.

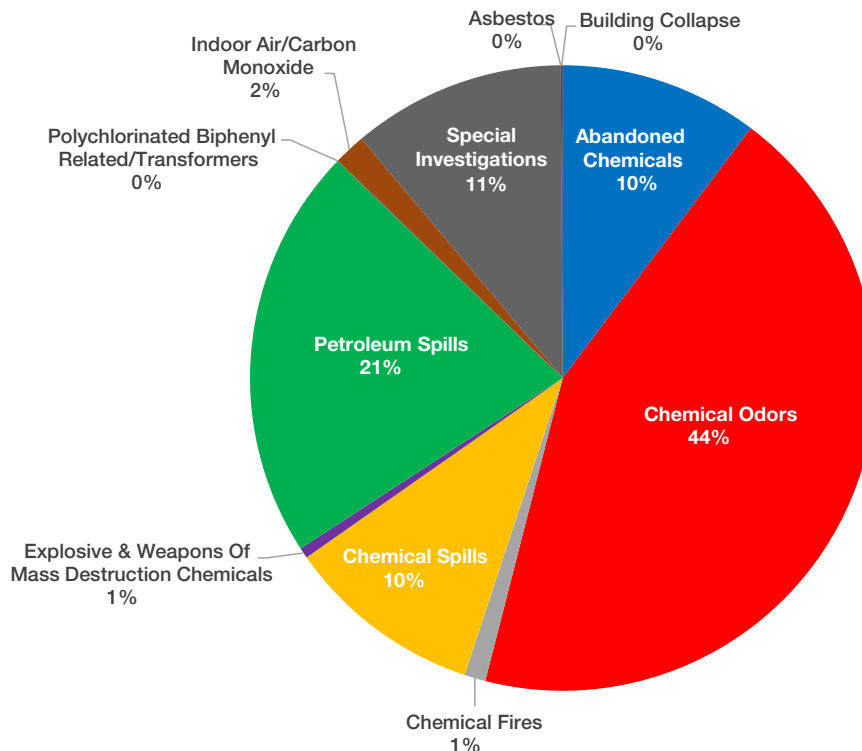
With nearly 3,900 response incidents per year and counting, 394 (10%) of these incidents involve abandoned chemicals. Under routine circumstances, these substances are removed and transported by certified environmental contractors. The process, which incurs thousands of dollars in cost and distance are 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. The plan also considerably reduces the dependency of overnight (third part) 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. If the material is deemed to be a petroleum-based product, the New York State Department of Environmental Conservation is notified for the removal. If the material is deemed to exhibit non-hazardous properties, the Department of Sanitation is notified for the removal. 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 it does not exceed the allowable storage quantities. 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.

Hazardous Materials Responses by Incident Type

DERTA responded to 3,836 incidents of hazardous material releases in Fiscal Year 2016. Of these incidents, 44% were responses to reports of chemical odors; 21% were petroleum spills; 10% were abandoned chemicals; 10% were responses to chemical spills and 11% were responses to special investigations.



Hazardous Materials Responses by Incident Type - Fiscal Year 2016

CATEGORY	FISCAL YEAR 2016												TOTAL
	JUL'15	AUG'15	SEP'15	OCT'15	NOV'15	DEC'15	JAN'16	FEB'16	MAR'16	APR'16	May'16	JUN'16	
Abandoned Chemicals	52	63	34	31	29	29	24	26	38	30	28	30	394
Chemical Odors	155	196	179	155	133	86	92	95	137	131	148	170	1677
Chemical Fires	6	3	9	2	3	5	3	6	0	4	0	1	42
Chemical Spills	39	40	30	34	26	26	39	16	42	30	34	35	391
Explosive & Weapons Of Mass Destruction Chemicals	0	2	2	1	3	0	2	3	3	2	0	3	21
Petroleum Spills	84	78	69	72	61	61	45	60	73	61	92	64	820
Polychlorinated Biphenyl Related/Transformers	0	0	0	0	0	0	0	0	0	1	0	0	1
Indoor Air/Carbon Monoxide	11	4	5	3	2	8	9	6	7	1	3	4	63
Special Investigations	37	45	40	50	26	25	32	43	48	25	25	27	423
Asbestos	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Collapse	0	1	0	1	0	0	0	1	0	0	0	1	4
Total for Month	364	432	368	349	283	240	246	256	348	285	330	335	3,836

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 2015.

The United States Environmental Protection Agency (EPA) 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 1 of each year and cover activities for the previous calendar year.

TRI data presented in this section refer to 23 New York City facilities that have reported their releases to EPA, 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 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, toluene, n-hexane, xylene (mixed isomers) and 1,2,4-trimethylbenzene. These substances represent more than 97% of the total reported releases by weight. Ammonia alone represents 95% of the total reported released.

These releases were mostly from facilities in the following industrial sectors: electric services (95.48% of the total releases), petroleum bulk stations and terminals (4.36%), other chemical and allied products (0.06%), nonferrous metal (except aluminum) smelting and refining (0.05%), paint and coating manufacturing (0.02%).

Releases from facilities in the electric services industry accounted for all the ammonia emissions, Paint and coating manufacturing and petroleum bulk stations and terminals accounted for all the toluene releases. Electric services industry and petroleum bulk stations and terminals accounted for all n-hexane 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 23 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 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 701 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 the following pages shows the release figures in air, in pounds per year, for all TRI substances by Community Boards.

Year 2015 Toxic Release Inventory Data In New York City By Community Board

Based on Year 2015 Section 313 data submitted to the State Emergency Response Commission

CB	CHEMICAL NAME	RELEASE TO AIR (Pounds Per Year)
<hr/>		
B01	1,2,4-TRIMETHYLBENZENE (1 detail record).....	363.64
	LEAD (1 detail record).....	0.12
	NAPHTHALENE (1 detail record).....	268.74
	POLYCYCLIC AROMATIC COMPOUNDS (1 detail record)	0.61
	Summary for Community Board B01 (4 detail records)	633.11
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B09	1,2,4-TRIMETHYLBENZENE (1 detail record)	22.20
	Summary for Community Board B09 (1 detail record)	22.20
Total for BRONX (5 detail records)		655.31
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K01	1,2,4-TRIMETHYLBENZENE (2 detail records).....	175.94
	BENZENE (2 detail records)	348.76
	ETHYLBENZENE (2 detail records).....	79.84
	NAPHTHALENE (1 detail record).....	26.00
	N-HEXANE (2 detail records)	1,921.69
	POLYCYCLIC AROMATIC COMPOUNDS (1 detail record)	0.69
	POTASSIUM BROMATE (1 detail record).....	15.00
	TOLUENE (2 detail records)	691.43
	XYLENE (MIXED ISOMERS) (2 detail records)	471.01
	Summary for Community Board K01 (15 detail records).....	3,730.36
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K02	AMMONIA (1 detail record)	71,811.20
	Summary for Community Board K02 (1 detail record)	71,811.20
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K05	LEAD COMPOUNDS (1 detail record).....	78.59
	METHANOL (1 detail record).....	10.00
	METHYL ISOBUTYL KETONE (1 detail record).....	10.00
	TOLUENE (1 detail record)	10.00
	XYLENE (MIXED ISOMERS) (1 detail record)	10.00
	Summary for Community Board K05 (5 detail records)	118.59
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K07	1,2,4-TRIMETHYLBENZENE (2 detail records).....	40.40
	LEAD (1 detail record).....	0.06105
	NAPHTHALENE (2 detail records).....	3.70
	N-HEXANE (2 detail records)	0.40
	XYLENE (MIXED ISOMERS) (2 detail records)	138.30
	Summary for Community Board K07 (9 detail records)	182.86
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K15	LEAD (1 detail record).....	0.035
	Summary for Community Board K15 (1 detail record).....	0.0035
Total for BROOKLYN (31 detail records)		75,843.05
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M06	AMMONIA (1 detail record)	37,515.00
	BENZO(G,H,I)PERYLENE (1 detail record)	0.118
	POLYCYCLIC AROMATIC COMPOUNDS (1 detail record)	1.21
	Summary for Community Board M06 (3 detail records)	37,516.33
Total for MANHATTAN (3 detail records)		37,516.33

Year 2015 Toxic Release Inventory Data (Continued)

C. B.	CHEMICAL NAME	RELEASE TO AIR (Pounds Per Year)
Q01	1,2,4-TRIMETHYLBENZENE (2 detail records).....	212.20
	AMMONIA (2 detail records).....	46,896.60
	BENZENE (1 detail record).....	55.60
	BENZO(G,H,I)PERYLENE (2 detail records).....	0.05999565
	CHLORODIFLUOROMETHANE (1 detail record).....	97.00
	DIOXIN AND DIOXIN-LIKE COMPOUNDS (1 detail records).....	0.0000837
	ETHYLBENZENE (1 detail record).....	77.20
	MERCURY (1 detail record).....	11.00
	NAPHTHALENE (3 detail records).....	265.90
	N-HEXANE (1 detail record).....	89.20
	POLYCYCLIC AROMATIC COMPOUNDS (3 detail records).....	64.355
	TOLUENE (1 detail record).....	1,485.00
	XYLENE (MIXED ISOMERS) (1 detail record).....	666.30
	Summary for Community Board Q01 (20 detail records).....	49,920.42
Q07	ETHYLENE GLYCOL (1 detail record).....	10.00
	NAPHTHALENE (1 detail record).....	10.00
	POLYCYCLIC AROMATIC COMPOUNDS (1 detail record).....	0.10
	TETRACHLOROETHYLENE (1 detail record).....	10.00
	ZINC (FUME OR DUST) (1 detail record).....	5.00
	Summary for Community Board Q07 (5 detail records).....	35.10
Q13	ETHYLBENZENE (1 detail record).....	35.30
	NAPHTHALENE (1 detail record).....	120.20
	Summary for Community Board Q13 (2 detail record).....	155.50
Q14	POLYCYCLIC AROMATIC COMPOUNDS (1 detail record).....	13.51
	Summary for Community Board Q14 (1 detail records).....	13.51
Total for QUEENS (28 detail records)		50,124.53
CityWide Total		164,139.21

ADMINISTRATIVE INFORMATION

Agency	Div/ Program	Time (min)	Emergency personnel				Totals	
			No.	Title	Salary	Subtotal		
DEP	Hazardous Materials Emergency Response	5 - 10	1	Executive Director	\$143,384.00	\$143,384.00	\$2,387,931.00	
			1	Deputy Director (Operations)	\$134,982.00	\$134,982.00		
			1	Deputy Director (RTK)	\$94,920.00	\$94,920.00		
			4	WMD / Sr. HazMat Specialists	\$91,948.00	\$367,792.00		
			25	WMD / HazMat Specialists	\$60,000.00	\$1,500,000.00		
			1	Special Officer	\$50,479.00	\$50,479.00		
			1	Supervisor Electrician	\$96,374.00	\$96,374.00		
NYPD	Emergency Service Unit	19	1	Deputy Chief	\$207,656.00	\$207,656.00	\$2,555,713,449.00	
			1	Deputy Inspector	\$188,465.00	\$188,465.00		
			6	Captains	\$179,669.00	\$1,078,014.00		
			12	Lieutenants	\$139,906.00	\$1,678,872.00		
			39	Sergeants	\$119,684.00	\$4,667,676.00		
			227	Detectives	\$105,773.00	\$24,010,471.00		
			70	Police Officers	\$92,555.00	\$6,478,850.00		
	COBRA Trained	25	27,199	COBRA Trained Police Officers	\$92,555.00	\$2,517,403,445.00		
FDNY	FIRE	5 - 10	1	Assistant Chief	\$200,000.00	\$200,000.00	\$487,768,500.00	
			3	Deputy Assistant Chief	\$198,000.00	\$594,000.00		
			12	Deputy Chief	\$196,000.00	\$2,352,000.00		
			80	Battalion Chief	\$178,000.00	\$14,240,000.00		
			185	Captains	\$137,700.00	\$25,474,500.00		
			460	Lieutenants	\$121,800.00	\$56,028,000.00		
	Medical			4000	Firefighters	\$91,000.00		\$364,000,000.00
				50	Officers	\$65,000.00		\$3,250,000.00
				190	Paramedic	\$57,000.00		\$10,830,000.00
270	EMT	\$40,000.00	\$10,800,000.00					
DOHMH	Office of Environmental Investigations; Office of Radiological Health	30-45	2	City Research Scientist (Rad Response)	\$80,888.50	\$161,777.00	\$902,065.00	
			2	Scientist (Radiation Response)	\$74,104.50	\$148,209.00		
			5	Assoc. PH Sanitarian (Environmental Investigations)	\$67,937.20	\$339,686.00		
			1	Administrative Staff Analyst NM (Radiation Response)	\$83,352.00	\$83,352.00		
			3	Public Health Sanitarian II (Environmental Investigations)	\$56,347.00	\$169,041.00		
DSNY	Environmental Police Unit	10 - 45	1	Deputy Director	\$75,033.00	\$75,033.00	\$611,359.00	
			1	Lieutenant	\$96,916.00	\$96,916.00		
			6	Environmental Police Officers	\$73,235.00	\$439,410.00		
OEM	Office of Emergency Management	20	18	Responders	\$90,649.44	\$1,631,689.92	\$1,631,689.92	
Budgets were submitted by individual agencies						Total:	\$3,049,014,993.92	

ADMINISTRATIVE INFORMATION (continued)

New York City Department of Environmental Protection

Vincent Sapienza, P.E., Acting Commissioner

Bureau of Police and Security

Kevin McBride, Deputy Commissioner

Division of Emergency Response and Technical Assessment

Vassilios Zoumboulis, P.E., Director

Dr. Harry Mayer, Deputy Director of Operations

Joanne Nurse, Deputy Director of Right-To-Know Program

ACKNOWLEDGEMENTS

The New York City Department of Environmental Protection would like to thank the members of the Hazardous Substance Advisory Board for their critical evaluation and suggestions on implementing the New York City Community Right-to-Know Law.

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:
 - Division of Environmental Response and Technical Assessment,
 - New York City Police Department
 - the New York City Fire Department,
 - New York City Department of Health & Mental Hygiene,
 - New York City Department of Sanitation,
 - New York City Office of Emergency Management, and
 - 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 acts, storage or releases that involve the spread of hazardous substances into our environment.



**Environmental
Protection**

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