Chemical Security in New Jersey:

An Overview of Planning, Information Sharing, and Response

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Executive Summary

Why Is Chemical Security a Concern?

The terrorists who attacked the United States on September 11th, 2001 highlighted vulnerabilities in homeland security by overcoming countermeasures and by using U.S. technology to execute their destructive plans. While the terrorists did not target chemical facilities on 9/11, the task of securing and protecting hazardous materials within the U.S. presents a great challenge. An area of northern New Jersey between Kearny and Linden contains several chemical plants that use products that, if released, could kill or sicken millions. What is more, this "Chemical Corridor" also sits near some of the United States' most critical financial, commercial, and transportation infrastructure.

One worst-case scenario contained in the federal Risk Management Plans (RMPs) features a liquid spill and vaporization of chlorine at Kuehne Chemical facility. This scenario assumes that 180,000 pounds of liquid is spilled in 10 minutes at the Kuehne facility. With a wind of 3.5 miles per hour, the chlorine cloud would spread over 14 miles in the direction the wind is blowing. In the potential danger zone are 12 million residents, as well as schools, hospitals, a correctional facility, commercial zones, and recreational areas, including parks. The RMP contains no reference to passive or active mitigation systems against a potential release.

Not far behind Kuehne is Infineum USA's Bayway plant. A release of chlorine gas from that facility could spread out 14 miles at a rate of 18,000 pounds per minute over 10 minutes, potentially affecting 4.2 million people. The significance of both scenarios at Kuehne and Infineum is that their chemicals, if released, could reach multiple municipalities, counties, and states, most notably New York City, thus requiring the coordination of dozens of local, state, regional and federal agencies.

A series of recent reports and hearings on the issue of chemical security in the United States have warned of the potential terrorist exploitation of security gaps. This study of the "Chemical Corridor," compiled by researchers at the Maxwell School of Syracuse University, is submitted to the United States House of Representatives Committee on Homeland Security (HCHS) to provide its members with an overview of New Jersey's current state of preparedness for responding to a chemical catastrophe.

Several gaps exist within the current system for protecting against chemical accidents and attacks in the State of New Jersey. These gaps are exhibited in the actual physical security of the chemicals, in inter-agency policy coordination and information sharing, and in the ability to coordinate a regional response to a large-scale attack. Also, new legislation giving the Department of Homeland Security (DHS) authority to set standards for the plants may undermine existing stricter statutes at the state level. Our investigation found continuing shortcomings in each of these areas and analyzed various ways to improve the overall security situation.

Overview of Current Chemical Facility Security in New Jersey[1]

Assessing the physical security and risk management procedures of the individual chemical plants selected for the snapshot in Appendix 8 of this report was difficult because of the sensitivity of the information. While New Jersey laws require chemical facilities to implement certain security measures, little public information is available about how plants are complying with these regulations. The information that was available in the federal RMPs, was

vague and lacked sufficient information to fully evaluate the countermeasures the plants are using to guard against a potential terrorist attack and/or a release of toxic chemicals. Other information sources, such as Site Vulnerability Assessments (SVAs), are only accessible to a very limited number of individuals for security and trade secrets reasons. Furthermore, New Jersey's Domestic Security Preparedness Act allows for public information to be withheld for security reasons. This rule has been inconsistently interpreted by agencies at the state and local level, sometimes resulting in no information being released to the public.

This tight hold on information, whether it is for security or proprietary reasons, contributes to another problem: a lack of coordination between the plants and government agencies. While some plants conduct joint emergency response exercises with first responders, others do not provide information on their coordination efforts, making it difficult to evaluate the capacity of plants and surrounding communities to respond to a potential terrorist attack. The lack of information sharing is striking, considering the potential danger resulting from an attack on these facilities.

One of the obvious concerns in light of these catastrophic scenarios is the coordination between agencies within New Jersey, as well as regional coordination with New York City, New York State, Delaware, Pennsylvania, and other surrounding areas. Our report found that officials from different agencies disagree as to the current capability to respond to an event that would affect the entire region. Questions also remain about new homeland security entities within New Jersey and how they complement the traditional agencies such as the State Police, which is tasked with coordinating response to large-scale emergencies in the State.

Further evaluation of the level of preparedness and response capabilities of the stakeholders in the region should be undertaken. More information about the facilities' operations, security, and emergency plans must be shared with relevant government agencies. These government agencies in turn must share this information with each other so that all parties may move towards creating a more effective contingency plan for the possible release of toxic chemicals. Open and continuous dialogue between the chemical companies and relevant government agencies will also help highlight areas where regulations and/or laws may need to be altered or amended to expedite the creation of an effective prevention and response system for the Chemical Corridor.

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List of Acronyms

Abbreviation	Name
ACC	American Chemistry Council
AFL/CIO	American Federation of Labor/Congress of Industrial Organizations
APA	Administrative Procedure Act
APR	Air-Purifying Respirator
BER	New Jersey Department of Environmental Protection Bureau of Emergency Response
BPU	New Jersey Board of Public Utilities
BZPP	Buffer Zone Protection Plan
CAA	Clean Air Act
CAT	Contractor Administration Team
CBRNE	Chemical, Biological, Radiological, Nuclear and Explosive
CEPPO	EPA Chemical Emergency Preparedness and Prevention Office
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
CSAT	Chemical Security Assessment Tool
CVI	Chemical-Terrorism Vulnerability Information
DCA	New Jersey Department of Community Affairs
DHS	Department of Homeland Security
DMVA	New Jersey Department of Military and Veteran Affairs
DOD	Department of Defense
DOT	Department of Transportation
DPCC	Discharge, Prevention, Containment and Countermeasure Program
EHS	Extremely Hazardous Substance
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPIC	Electronic Privacy Information Center
ERP	Emergency Response Plan
FBI	Federal Bureau of Investigations
FBI LEO	Federal Bureau of Investigation Law Enforcement Online
FEMA	Federal Emergency Management Agency
FEPP	Facility Emergency Preparedness Program
FIG	Field Intelligence Group
GE	General Electric Energy
GIS	Geographic Information System
HAZMAT	Hazardous Materials
HCHS	United States House of Representatives Committee on Homeland Security
HMAC	Hazardous Materials Advisory Council
HSIN	Homeland Security Information Network
IAC	Infrastructure Advisory Council (part of NJDSPTF)
IMTT	International-Matex Tank Terminals
ISAC	Chemical Sector Information Sharing and Analysis Center
IST	Inherently Safer Technologies
JTTF	Joint Terrorism Task Force
LEPC	Local Emergency Planning Committees
LIMAC	Linden Industrial Mutual Aid Council
LPG	Liquefied Petroleum Gas
MIC	Methyl Isocyanate

MOU	Memorandum of Understanding
MSDS	Materials Safety Data Sheet
MW	Megawatt
NESEC	Northeast States Emergency Consortium
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NJCDCA	New Jersey Civilian and Disaster Control Act
NJDEP	New Jersey Department of Environmental Protection
NJDHSS	New Jersey Division of Health and Senior Services
NJDSPA	New Jersey Domestic Security Preparedness Act
NJDSPTF	New Jersey Domestic Security Preparedness Task Force
NJEMS	New Jersey Environmental Management System
NJESF	New Jersey Emergency Support Functions
NJOEM	New Jersey Office of Emergency Management
NJOHSP	New Jersey Office of Homeland Security and Preparedness
NRP	National Response Plan
NYPD	New York Police Department
OAG	New Jersey Office of the Attorney General
OCA	Offsite Consequence Analysis
OIC	Operations Integrity Committee
OIMS	Operations Integrity Management System
OPRA	Open Public Records Act
OSHA	Occupational Safety and Health Administration
PDA	Preliminary Damange Assessment
PHA/RA	Process Hazard Analysis with Risk Assessment
PSAC	Private Sector Advisory Council
PSM	Process Safety Management
PTFE	Polytetrafluoroethylene
RAMCAP	Risk Analysis and Management for Critical Asset Protection
RCRA	Resource Conservation and Recovery Act
RIJAN	Regional Information Joint Awareness Network
RMP	Risk Management Plan
ROIC	Regional Operations Intelligence Center
RTKA	Worker and Community Right to Know Act
SARA	Superfund Amendments and Reauthorization Act
SCBA	Self Contained Breathing Apparatus
SCCA	Spill Concentration and Control Act
SCIF	Sensitive Compartmented Information Facility
SEOP	Statewide Emergency Operations Plan
SERC	State Emergency Response Commissions
SERM	Safety, Environmental and Risk Management
SHE	Safety, Health, and Environmental Manual
SHMT	State Hazard Mitigation Team
SOP	Standard Operating Procedure
SVA	Site Vulnerability Assessment
Task Force	New Jersey Domestic Security Preparedness Task Force
TCPA	New Jersey Toxic Catastrophe Prevention Act
TDI	Toluene Diissocyanate
TFE	Tetrafluoroethylene
TIFC	Terrorism Intelligence Fusion Center
VPP STAR	Voluntary Protection Program – Safety through Accountability and Recognition
WEC	New Jersey Work Environment Council

Introduction

Hazardous chemicals have not traditionally been the focus of U.S. national security, but after 9/11 the threat of a chemical attack became more of a concern. Exposure to hazardous chemicals causes serious illness and can have long-term health implications that are often fatal. What makes this situation more alarming is the accessibility of the materials. The most commonly used chemicals, such as ammonia and chlorine, are available to the general public and can be purchased without special permits. The level of danger depends upon the amount and concentration of the chemical used. Improper handling and storage of large quantities of hazardous chemicals increases the likelihood of a catastrophe that causes an expansive number of casualties. Lessons should be taken from some of the better-known examples in recent history.

As U.S. forces continue to battle a wide-array of insurgents in Iraq, a new lethal tactic is being used against American service members and Iraqi civilians. Insurgents are detonating chlorine bombs to both achieve immediate damage and long-term psychological impact. Since January 2007, insurgents used chlorine bombs 11 times to kill over a hundred people and sicken hundreds more.

These attacks are becoming increasingly sophisticated. On March 16th, three separate suicide attacks in the al-Anbar province used chlorine to maximize casualties. The first attack occurred at a checkpoint northeast of Ramadi, when a truck bomb wounded one U.S. service member and one Iraqi civilian. A second truck bomb detonated in Fallujah, killing two policemen and leaving a hundred Iraqis showing signs of chlorine exposure. Forty minutes later, yet another chlorine-laden truck bomb exploded at the entrance to a housing estate south of Fallujah, this time injuring 250 and according to some reports killing six.[2]

On April 30th, insurgents filled a tanker with chlorine and detonated it near a restaurant in Ramadi, killing six and wounding ten. On May 16th, attackers chose an open-air market in Diyala to release the toxic gas, killing 32 and injuring 50. While these attacks are not the deadliest ones taking place in Iraq, their lingering effects caused a high-level of panic as hundreds became ill, often hours after the bombing took place.[3]

As terrorist groups become more connected and integrated with modern technology and the internet, some experts on chemical security believe that it is only a matter of time until tactics used in Iraq are exported to other locations.[4] When terrorists attacked the United States on September 11th, 2001, they used American technology and resources to carry out their plans. In northern New Jersey, large amounts of toxic chemicals, like chlorine, sit dangerously close to the Nation's most densely populated metropolitan area. The United States cannot allow terrorists to again hijack its resources to inflict catastrophic damage on American society. The sites that contain these chemicals are in an area that includes the particularly problematic stretch from Kearny, NJ to Linden, NJ. Security measures at these sites must be strengthened to prevent an attack that could kill millions and fundamentally disrupt the U.S.' economy, transportation, and health care system.

Protecting the chemicals in many of these sites requires that different offices, agencies, and departments work together and coordinate on both countermeasures to prevent an attack and on how to respond, should one occur. The first priority is to understand what security measures the facilities themselves use to guard against the release of chemicals and to repel an attack on the plant. This report also examines the current system for information sharing and

coordination between local, state, and federal government agencies, and assess their combined capability to prevent and a respond to a chemical attack. The level of communication between government agencies and the chemical facilities is also studied to determine how relationships at different levels of government affect regulation and protocol.

This report focuses on the preparedness and information sharing aspects because security measures and relationships play a vital role in the prevention of attacks, and would be at the heart of an effective response to any chemical disaster. Past incidents, such as the Bhopal tragedy, help to highlight why coordination between private companies and government agencies is an essential part of disaster prevention, as is cooperation among the various levels of government.

Bhopal: The World's Worst Chemical Disaster[5]

Union Carbide in Bhopal, India

Union Carbide opened up a pesticide factory in the city of Bhopal, India in 1969, believing it had discovered an untapped market for its pest control products. But sales never quite met Union Carbide's expectations, as farmers, suffering through a drought, were unable to afford the products. As a result, production ceased at the plant in the early 1980s. However, vast quantities of extremely dangerous chemicals remained. Particularly alarming were three tanks that held over 60 tons of methyl isocyanate (MIC), a key ingredient to the primary pesticide the plant produced. With the cessation of production, safety at the plant was no longer a concern to Union Carbide. Accordingly, Union Carbide over time disabled, intentionally or accidentally, six safety systems that had protected the plant from an accidental release of the MIC, including scrubbers, water curtains, a flare tower, and a refrigeration system.

The situation was critical by December 2, 1984. That evening, when an employee was flushing a corroded pipe, multiple systems failed, allowing water to enter into the largest of the three tanks holding MIC. When the water mixed with the MIC, an uncontrolled reaction began. The tank quickly overheated and was thrown out of its protective concrete. A cloud of MIC, hydrogen cyanide, mono methyl amine, and other heavier-than-air chemicals spouted out. Hugging the ground, this cloud was blown by the prevailing winds, settling over the city of Bhopal.

The initial reaction was slow because the chemical release occurred in the middle of the night. After an initial alarm system was activated to warn the public, it was quickly shut off to avoid causing panic. As a result, many people either never knew of the unfolding crisis or thought it had been resolved. Hospitals and doctors were not informed of the proper treatment methods of MIC inhalation and were told to simply give cough medicine and eye drops to treat the symptoms.

People realized quickly that something was not right. One survivor recalls: "At about 12.30 am I woke to the sound of my baby coughing badly. In the half light I saw that the room was filled with a white cloud. I heard a lot of people shouting. They were shouting 'run, run'. Then I started coughing with each breath seeming as if I was breathing in fire. My eyes were burning."

According to a local police officer, "everybody was very confused. Mothers didn't know their children had died; children didn't know their mothers had died, and men didn't know their whole families had died. Anyone who was left alive ran away blindly."

In the eight hours before the gas cleared, nearly 500,000 people were exposed. According to the British Broadcasting Corporation (BBC), 3,000 people died within days. There is some dispute, but it is estimated that between 15,000 and 22,000 deaths were ultimately caused by the release. Another 120,000 are believed to still be suffering after-effects, including breathing difficulties, cancer, birth defects, blindness, gynecological complications, and other long-term health issues. On average, one person dies from these effects per day, nearly 23 years later. According to Rashida Bi, a survivor who lost five family members to cancer, those who escaped with their lives "are the unlucky ones; the lucky ones are those who died on that night."

New Jersey's Security Concerns

The Kuehne Chemical facility is particularly notable as it is has the potential of causing the greatest damage; regularly receiving shipments of pressurized chlorine, which it stores on-site. The plant estimates that in the event of a breach of one or more railcars or storage facilities, the gas would spread over a 14-mile radius within 10 minutes, including significant parts of northern New Jersey, Manhattan, Brooklyn, and Staten Island. The population of this area is estimated to be 14 million, which would result in a catastrophe of far greater proportions than was seen in Bhopal almost 25 years ago.

The Infineum USA facility, in Linden, also stores chlorine and has an estimated 4.2 million people within the 4-mile danger zone radius that includes northern New Jersey and New York.

Preventing and preparing for chemical catastrophes is particularly challenging, due to the complex nature of the threats. Internal threats are present simply because of the nature of the processes and operations of chemical plants. Insufficient employee training, regarding the proper handling of chemicals, as well as human error, could lead to a disaster, such as the one in Bhopal. But external threats posed by individuals seeking to deliberately cause a chemical release have also become a significant concern since 9/11. The potential damage a terrorist attack could cause is frightening, particularly in the area of northern New Jersey that this report analyzes.

Huge efforts have been made at all levels of government to address this emerging threat. With such a dense population of chemical facilities, New Jersey's Toxic Catastrophe Prevention Act (NJTCPA) is specifically designed to enhance domestic security preparedness. At the same time, the American Chemistry Council worked with the FBI and DHS to layout improvements to the security program it requires its own members to follow, and which was the basis for New Jersey's Best Practice Standards.

This report focuses on the current planning and response capabilities in the State of New Jersey, and the coordination with other potential stakeholders in the region. Gaps were identified in the physical security and risk management at the facilities in northern New Jersey, agency coordination/information sharing, and in community preparedness. Additionally, the effect of the new DHS authority on the current systems is not yet known.

Methodology

Defining the "Chemical Corridor"

It must be noted that the term "Chemical Mile" is widely used to describe a critical security area in northern New Jersey. This term, however, is misleading.

First of all, the region extends further than one mile, and secondly, the reason for the area's vulnerability extends beyond only chemical facilities. The region includes critical infrastructure from numerous sectors, creating a high concentration of potential terrorist targets. The area includes Newark-Liberty International Airport, major seaport Port Elizabeth, railway yards, railway lines, and highway system nodes that connect the area to the rest of the Northeast. This geographic region includes the area termed, the "most dangerous two miles in America" by the Federal Bureau of Investigation (FBI). The danger of an attack or accident is compounded by proximity to both the Newark and New York City metropolitan areas.

As this report is focused on the security risk posed specifically by the chemical facilities in the area, we use the term "Chemical Corridor."

This report's snapshot overview of chemical facilities focuses on a narrow geographical area in New Jersey, stretching approximately 10 miles north to south on the New Jersey Turnpike. The area contains an unusually high concentration of facilities that use, store, or produce potentially toxic or noxious chemicals regulated by either the federal Clean Air Act (CAA) or the New Jersey Toxic Catastrophe Prevention Act (TCPA). While centered on the industrial neighborhood near Newark airport, the area stretches from South Kearny in the north to Linden in the south, and includes the municipal areas of Kearny, Newark, Elizabeth, Linden, and Bayonne. The region is marked on the north by the Kuehne Chemical Plant in South Kearny and on the south by the Infineum USA plant in Linden.

A total of 19 facilities are regulated under CAA and/or TCPA in this defined area. A complete list and detailed information for each facility can be found in Appendices 8-12. The facilities range in size (in terms of number of people immediately threatened) from 12 million to zero. They perform a variety of functions including manufacturing chemicals, importing chemicals, producing paints, producing electrical energy, and producing fragrances. Maps of the counties the facilities are located in, as well as county demographic information, are presented in the geographical information systems (GIS) data and maps found in Appendices 2-7. A summary of findings is provided in the New Jersey Chemical Plant Security: General Trends section of this report. Information on individual facilities is found in Appendices 8-12.

Data Collection: Chemical Facilities

In compiling the snapshot of chemical facilities section of this report, found in Appendices 8-12, our research team attempted to consult a wide variety of sources to ascertain the individual facilities' security arrangements. We began by accessing publicly available sources, including company websites and reports such as "Safety and Security First: Protecting our Jobs, Families and Hometowns From Toxic Chemical Disasters," by the New Jersey Work Environment Council, an umbrella organization advocating on behalf of labor, and environmental and community organizations.

We also attempted to obtain the Risk Management Plans (RMPs) from both the State of New Jersey and the Environmental Protection Agency (EPA). These plans, required by the

federal CAA and by New Jersey's TCPA, document which extraordinarily hazardous substances facilities store and/or produce, as well as their plans to protect the surrounding community from a potential release. Despite repeated efforts, we were unable to obtain the RMPs from the State of New Jersey. We were informed that this information, while legally available to the public, is not generally accessible because of agencies' interpretation that it is privileged security information. The federal RMPs, which had previously been available on the Internet, were removed in the aftermath of the September 11 attacks. These documents may now only be viewed in federal reading rooms, which we accessed at the federal reading room in Buffalo, NY.

In addition to these public sources, we attempted to gather information by contacting the facilities directly; however, in most cases these efforts were unsuccessful. The facilities, the companies that ran them, and in several instances, the holding companies, were unwilling to provide specifics regarding their vulnerabilities, assessments, and plans.

Data Collection: Information Sharing and Coordination

In researching the legal, preparedness and planning, response, and recovery sections of this report, we accessed public records from both government and private sources. Chemical security in the United States, and particularly in New Jersey, has been of primary concern to legislators and homeland security officials. As a result of this interest, numerous studies and committee hearings have concentrated on the subject. Notable reports include the "Chemical Plant Security" report of the Congressional Research Service,[6] as well as expert testimony from several individuals, including former Coast Guard Officer and security expert Dr. Stephen Flynn.[7]

Additionally, a number of new regulations, including Section 550 of the Homeland Security Appropriations Act of 2007, provide a framework within which to evaluate the current preparedness and response capabilities of New Jersey.

Chemical security information is closely guarded, we therefore based most of this report on interviews with officials regulating the chemical industry or working on emergency preparedness and response. Despite the constraint of producing this report in three weeks, we made considerable effort to contact municipal, county, state, and federal agency officials. However, the individuals who were able and willing to speak with us for the purposes of this report were all at the state or regional level. Interviewees were forthcoming in discussing current methods, both formal and informal, for coordinating and sharing information in preparation for a chemical emergency.

Though the State of New Jersey has adopted an all-hazards approach to preparedness and response, officials were able to provide in-depth and detailed information on the chemical security situation. Through discussions with a variety of officials from different agencies, we were able to obtain a comprehensive picture of the current scenario. As is discussed in the further research section of this report, discussions with local level preparedness and response officials would be beneficial in providing a more comprehensive picture of chemical security capabilities in New Jersey.

Legal Framework

Federal and New Jersey regulations dictate numerous reporting and security measures for chemical facilities. This section provides a brief overview of the most prominent laws, why they were created, and the effects that they have on the current chemical security situation in New Jersey. Further discussion of these effects is included in later sections of this report.

Federal Legal Framework

Given the catastrophic proportions of the potential loss of life if a chemical release occurs, the chemical sector has drawn significant attention by the federal government since the terrorist attack of 9/11. Uniformity is hard to come by when creating regulations that encompass diverse industries, and security is no exception. Security assessments and measurements vary even within each sector, depending on the type of security - for example, technological versus process security in one sector. Since 2001, the federal government, particularly the Department of Homeland Security (DHS), has worked to develop a comprehensive security system for the chemical community to follow. DHS recently instilled the Chemical Facility Anti-Terrorism Standards, in the hopes of standardizing security practices for each facility. Federal agencies, such as the Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA), have developed extensive regulations for industries, especially the chemical industry, to ensure a safer and cleaner environment.

Environmental Protection Agency regulations

Clean Air Act and Risk Management Plans

The Clean Air Act (CAA), originally passed in 1963 but not fully implemented until 1970, is a series of regulations aimed at reducing air pollution. To date, the version amended in 1990 is the most current. The CAA heavily regulates the release amounts of any toxic chemical that may cause health complications, such as cancer. It also targets the reduction of toxic chemicals that may cause smog, haze, acid rain, stratospheric ozone degradation, and other damage to clean air.

Section 112 (r) of the CAA directs facilities that store extremely hazardous substances (EHSs) to "identify hazards that may result from accidental releases, to design and maintain a safe facility, and to minimize the consequences of releases when they occur."[8] For each EHS covered by CAA 112(r), the EPA regulates the amount of each chemical that can legally be released at a particular facility. Neither the substances nor the threshold amounts in the EHS regulated substances list under section 112(r) are necessarily the same as the EHS under EPCRA §302 and NJ Toxic Catastrophe Prevention Act (TCPA), which are discussed below.

The CAA is modeled as a floor; that is, each state and local government may implement more stringent regulations. In the case of New Jersey, the CAA supplements the TCPA, which pre-dated it. State and local rules and regulations that are not as stringent as the CAA are prohibited.

As a part of CAA, facilities are required to file Risk Management Plans (RMPs) at the federal and state levels. The reports include a listing of the most flammable and/or the most toxic chemicals each facility holds, along with their respective quantities. In addition, each facility has to assess the danger zone radius in the case of a chemical release, as well as the population within the area that would be affected. Both worst-case and alternative scenarios are

reported in the RMPs. Passive mitigation actions, such as dikes and firewalls are assessed and reported for the worst-case scenarios. Meanwhile, the alternative scenarios report both passive and active mitigation actions, such as sprinkler systems and water curtains.

Emergency Planning and Community Right-to-Know Act

Established in 1986, the Emergency Planning and Community Right-to-Know Act (EPCRA) requires the public to have access to information about hazardous and toxic chemicals in their communities. It also regulates any provisions on chemical handling and storage. The initiative for EPCRA started soon after the Bhopal, India Union Carbide disaster occurred. ECPRA Sections 301-303, 40 CFP Part 355 specifically lay out the guidelines for emergency preparedness and response involving hazardous materials. This Act requires every community in the country to be a part of an emergency plan of some kind. State Emergency Response Commissions (SERCs) are the state-level organizations required by EPCRA.

Occupational Safety and Health Administration

The Williams-Steiger Occupational Safety and Health Act of 1970 regulates that all employers implement practices maximizing health and safety of all employees. Fines will be imposed if the standards are not fulfilled. This Act provides the U.S. Department of Labor the authority to enter all laboratories and business workspaces to inspect compliance. Additionally, the Act gives OSHA the authority to "set standards, conduct inspections, and impose penalties for violators."[9] Employees also gained a significant level of influence through the right to "file complaints, accompany inspectors, and participate in Review Commission adjudications."[10] The Act also protects whistleblowers against any unfair retribution. All these provisions are important to ensure that chemical facility inspections and reporting are as comprehensive as possible, through the participation of front-line workers.

Homeland Security Appropriations Act of 2007: Chemical Facility Anti-Terrorism Standards[11]

Section 550 of the Homeland Security Appropriations Act of 2007 provided DHS the authority to require chemical facilities to implement certain security measures if they have not already done so. The "interim final regulations" released by DHS clarify the new or additional security measures chemical facilities must follow. DHS developed one threshold that applies to all chemical facilities. Assessments are not tiered into different levels according to risk and/or type of chemical. These regulations took effect on June 8, 2007. The Administrative Procedure Act (APA) would have, under normal circumstances, required DHS to release a public notice and seek comments on these chemical security proposals; however, Congress has allowed DHS to void this obligation.

DHS has developed networks, like the Homeland Security Information Network (HSIN), as forum to share information with relevant agencies on the federal, state, and local levels. The Federal Emergency Management Agency (FEMA) has begun to adopt these networks into its own practices. The Department of Defense (DOD) has its own classified and unclassified networks through which it communicates. What is more, neither DHS nor DOD share the same type of networks or develop efforts to connect them.[12] Also, some officials complain that the HSIN contains little actionable intelligence.

The Chemical Facility Anti-Terrorism Standards require each facility to assess its security vulnerability and site security. In addition to those assessments, each facility must develop set standards for its risk-based performance and alternative security initiatives. A third

party must audit all assessments of the overall process. Civil penalties will be administered if compliance is unsatisfactory, which may result in temporary or permanent closure of the facility. DHS also has authority to regulate and penalize any information disclosure that may widen levels of vulnerability for a possible attack.

Under the new regulations, each chemical facility has to submit a risk assessment methodology, which is completed through a secure DHS website and which follows a questionnaire format. Based on the answers supplied, the database will allow DHS to assess the facility's vulnerability and risk levels, and determine whether or not it needs to make changes to its existing security regulations. A vulnerability assessment is subsequently required, which includes the following three steps:

- Identify the assets on the facility;
- Apply specified threat scenarios to each asset to quantify the resulting consequences if an attack succeeded; and
- Apply the threat scenarios to each asset in light of the security measures in place and evaluate the likelihood and the degree to which the attack would succeed.[13]

In addition to assessing vulnerability within the boundaries of the facility, DHS also requires security measures to be implemented for a buffer zone around each facility.

As these regulations did not come into force until June 8, 2007,[14] their impact on the chemical security situation in New Jersey is not yet known. However, officials we spoke with indicated that New Jersey was involved in the development of the DHS regulations and will therefore not be severely affected. Please see the Chemical Security Preparedness and Response Gaps section for more information.

Chemical Security Act of 2006

Under this Act and congruent with CAA 112(r), Congress requires each chemical facility to self-identify the hazardous chemical by using "appropriate hazard assessment techniques."[15] Each facility is required to implement Inherently Safer Technology, including operations and maintenance in order to minimize potential criminal actions. Congress also requires the management of each facility to involve all employees in the implementation of the safe design, operations, and maintenance. Any changes need to be added within six months of the passage of this Act.

Guidelines for the Secretary of DHS to determine which facilities are at high risk include the following:

- The severity of the harm that could be caused by a criminal release;
- The proximity to population centers;
- The threats to national security;
- The threats to critical infrastructure;
- Threshold quantities of substances of concern that pose a serious threat; and
- Such other safety or security factors as the Secretary, in consultation with the [EPA], deem appropriate.[16]

After a facility is determined to be high-risk, DHS has one year to enforce the necessary enhancements. Each facility then has the following six months to add those changes.

National Response Plan

The National Response Plan (NRP), which was last updated May 25, 2006, is currently under review. It provides an overall approach in developing techniques for preparation and response to domestic incidents. NRP implements methods relating to "homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector,"[17] incorporating all sectors into one central plan. It is the basis for cooperation among all federal, state, local governments, as well as the private sector. The protocols they instigate include the following:

- Save lives and protect the health and safety of the public, responders, and recovery workers;
- Ensure security of the homeland;
- Prevent an imminent incident, including acts of terrorism, from occurring;
- Protect and restore critical infrastructure and key resources;
- Conduct law enforcement investigations to resolve the incident, apprehend the perpetrators, and collect and preserve evidence for prosecution and/or attribution;
- Protect property and mitigate damages and impacts to individuals, communities, and the environment; and
- Facilitate recovery of individuals, families, businesses, governments, and the environment.[18]

The Secretary of DHS holds the authority to declare the level of national significance of the emergency. Declarations are made under the following criteria:

- A federal department or agency acting under its own authority has requested the assistance of the Secretary of the DHS
- The resources of state and local authorities are overwhelmed and federal assistance has been requested by the appropriate state and local authorities
- More than one federal department or agency has become substantially involved in responding to an incident
- The Secretary of Homeland Security has been directed to assume responsibility for managing a domestic incident by the President.[19]

The criteria are utilized to minimize casualties and damages in addition to long-term mitigation and community recovery.[20]

Legal Framework in New Jersey

The State of New Jersey is home to a large number of facilities that store, use, or produce potentially toxic or noxious chemicals, including facilities that could potentially impact the metropolitan areas of New York City, Philadelphia, and Newark, among others. As a result, the government of New Jersey has long taken an interest in regulating the facilities. Regulations cover numerous topics, including security arrangements, emergency response plans, employee awareness, information sharing between the plants and local first responders, and community awareness. Many of these efforts predate by several years any significant federal regulations, including the amendments to CAA and EPCRA.

Worker and Community Right to Know Act[21]

New Jersey joined many other states and municipalities in August 1983 in passing a Right to Know Act (RTKA), which took effect between 1984 and 1986. The Act puts into place several significant regulations in response to widespread public concern following the discovery that toxic materials were leaking out and impacting the surrounding environment at numerous facilities.

First, the Department of Health and Senior Services (NJDHSS) was required to develop a workplace hazardous substance list, to include carcinogens, mutagens, and teratogens, based on OSHA, National Institute for Occupational Safety and Health (NIOSH), and other sources. The list was transmitted to employers, along with facts about the chemicals or materials. The Department of Environmental Protection (NJDEP) produced a similar environmental hazardous substance list. Each employer was to determine which potentially toxic or damaging materials they had on-site, and return the survey forms sent to them by the relevant agencies within 90 days.[22] The Office of Pollution Prevention and Right to Know, in NJDEP, and the Office of Right to Know, in NJDHSS, require that these surveys be updated regularly.

In order to keep the community informed of hazardous substances and to assist the NJDHSS and NJDEP in communicating with the public, these surveys are kept on file by the health departments of the various counties and are made available to the public upon request. In addition, any person may request a copy of the RTKA survey for any facility, from the State of New Jersey. State and local first responders, including police and fire, have access to the surveys as well.[23]

The RTKA also requires employers to provide training and education for employees, meet certain labeling requirements, and provide employees (as well as the State) with the requested information about potentially toxic chemicals produced, used, or stored on-site. Compliance is monitored by the two departments, which are authorized to maintain a field inspection staff and which are given the right to enter facilities to perform spot-checks. Site inspections include checking labeling on chemicals, whether employees were provided a workplace survey and hazardous substance fact sheet upon request, whether employers had made the availability of this information known, and whether employee-training programs had been instituted. In addition, inspections ensure that the facility provided NJDHSS and/or NJDEP records of employee exposure to the chemicals or other materials.[24]

Under the RTKA, if the Department finds an employer in violation of any provision, it has a number of avenues it could pursue. First, it can issue an order requiring the employer to comply. If this does not satisfactorily change the behavior of the facility, it can bring a civil action and levy a penalty of $2,500 and $1,000 per day of delay in compliance until the problems are corrected. If the facility is found to present knowingly false information, it is to be fined a minimum of $10,000 and up to $5,000 per day in violation of the RTKA.[25]

The federal EPCRA was passed a few years later in 1986, supplementing the RTKA. Under EPCRA, New Jersey formed a State Emergency Response Commission (SERC), which appointed, supervised, and coordinated the activities of Local Emergency Planning Commissions (LEPC).[26] The LEPCs are required by EPCRA to establish and annually review emergency response plans for the district. These plans are to identify effects of a release and the transportation routes, assess emergency notification procedures, designate an emergency coordinator and facility emergency coordinators, set in place methods to determine the occurrence of a release, identify the emergency equipment and facilities in the area that would

be called into service, outline plans for evacuation, and describe training and practice programs.[27]

In addition, as part of EPCRA, facilities are required to submit to the EPA information regarding the chemicals they store. This also includes annual information on the chemical, the amount stored on the site, information regarding how it was stored, and an indication of whether the facility manager would prefer information be kept confidential.

New Jersey Toxic Catastrophe Prevention Act[28]

The New Jersey Toxic Catastrophe and Prevention Act (NJTCPA) is designed to protect against the release, accidental or otherwise, of extremely hazardous substances (EHSs) by requiring precautionary and preemptive actions to mitigate likely scenarios. EHSs are defined as "a substance, which if released into the environment would result in a significant likelihood of causing death or permanent disability."[29] It was passed in 1986, enacted in 1988, and readopted every five years. In 1998, the TCPA was amended to include the EPA's CAA 112(r) Accidental Release Prevention Program, which includes additional toxic and highly flammable substances. In 2003, the TCPA list was amended again to include reactive hazards substances. As of 2004, TCPA regulates approximately 100-140 facilities that use 10,000 pounds or more of hazardous substances.[30] The current list of EHSs regulated under TCPA is included in Appendix 20.[31]

The TCPA requires each facility that stores, uses, or produces threshold quantities of EHSs, to submit RMPs to NJDEP. RMPs are also submitted to the federal EPA under the 1998 CAA. RMPs include details on the plant's standard operating procedures, safety reviews, preventative maintenance, employee training, accident investigation, risk assessment, and emergency response.[32] In addition, the TCPA requires an offsite consequence analysis be filed by each facility. The offsite consequence analysis reports on the impact an accidental or deliberate release of chemicals from the facility might have, the plant's accident history dating back five years, the relevant demographic characteristics of the neighborhood, and information on the prevention program, emergency response program (including who is to be involved), and information on the insurance the facility carries .[33]

New Jersey Spill Compensation and Control Act and Discharge Prevention, Containment, and Countermeasures Program

Passed into law in 1977, this Act requires chemical sector facilities containing more than 20,000 gallons of hazardous substances not including petroleum or over 200,000 gallons including petroleum, to submit Discharge Prevention, Containment, and Countermeasures (DPCC) plans as well as Discharge Cleanup and Removal plans, to NJDEP. This covers approximately 350 facilities, most of which fall under the Act because they store large quantities of petroleum. This program also seeks to ensure that facilities keep trained personnel, response plans, and emergency equipment at the ready.[34]

New Jersey Pollution Prevention Act

Passed into law in 1991, this Act requires facilities to minimize the use of hazardous substances.[35] This act encourages the identification and implementation of techniques that minimize the need to use and generate hazardous substances in industrial activity.

Open Public Records Act

The Open Public Records Act (OPRA) of 2002 authorizes all government records to be open to the public unless specifically exempted, and sets procedures for the request of this information. The New Jersey Domestic Security Preparedness Act (NJDSPA) has a clause that OPRA standards do not apply to certain types of chemical facility information. The uncertainty as to what information is not covered by OPRA has resulted in varying interpretations of what information regarding community planning for chemical emergencies should be available to the public. The resulting affects on community preparedness are discussed throughout this report.

New Jersey Domestic Security Preparedness Act and Best Practices Standards

In the wake of the terrorist attacks of September 11, 2001, the New Jersey Domestic Security Preparedness Act (NJDSPA) was signed into law. It established the State Domestic Security Preparedness Task Force (NJDSPTF or Task Force), which in turn created an Infrastructure Advisory Committee (IAC). The IAC consists of managers from 20 industrial sectors deemed critical to New Jersey's economy. (Currently the sectors are being reduced and reorganized to 17 to align with new DHS regulations.[36]) Each sector, including the chemical industry, formed a subcommittee to produce sector-specific security Best Practices Standards. The Best Practices Standards at TCPA/DPCC Chemical Sector Facilities (introduced in 2003) are based on the American Chemistry Council's Responsible Care® program.[37] Compliance with the Best Practices was initially voluntary.

In 2005, NJDEP required chemical sector facilities, regulated by TCPA to, among other things, comply with these Best Practices Standards. Facilities are required to create site vulnerabilities assessments (SVAs) and develop a comprehensive prevention, preparedness, and response plan to minimize the risk of a terrorist attack. SVAs are requested for all 800 chemical facilities in the State, whether or not they are TCPA/DPCC regulated. The SVAs are a self-assessment tool to assist facilities in locating their security weaknesses. At no point in time do they leave the plant's physical location, but they can be accessed on-site by local and state officials with appropriate clearances. [38]

Inspections were carried out by NJDEP to confirm that the facilities met these Best Practices Standards, and were prioritized according to the risks the facilities posed to the surrounding population. By the end of 2006, 157 facilities were fully compliant. To date, the four exceptions that are still outstanding are all Tier III facilities that have no offsite consequences.[39]

The NJDEP is waiting to see how the new DHS regulations will affect current state standards before conducting follow-up inspections.[40] In addition, sites that fell under the TCPA (approximately 45 of which were deemed to be in the chemical sector),[41] were required to evaluate the possibility of adopting Inherently Safer Technology (IST), which would reduce the amount of toxic or noxious chemicals located in the facilities, use materials in the least hazardous forms possible, and revamp the processes employed to minimize the possibility of accident caused by either human error, malfunction, or malicious action.[42]

In addition, under Executive Order 21, the State (with the authority of the NJDSPA) limited the OPRA by prohibiting the release of any documents that would "interfere with the State's ability to protect and defend the state and its citizens against attacks of sabotage and terrorism or would materially increase the risk or consequences of potential acts of sabotage or terrorism."[43] The consequence of this was to make a significant amount of the materials related to the security arrangements at chemical facilities impossible for the public to access.

In March 2006, Governor Jon Corzine issued Executive Order 5, establishing the Office of Homeland Security and Preparedness (NJOHSP), a cabinet-level office "empowered to administer, coordinate, lead, and supervise New Jersey's counter-terrorism and preparedness efforts."[44] In particular, the Office is responsible for working with federal law enforcement authorities as well as authorities from other states. NJOHSP is responsible for planning, overseeing, and distributing federal homeland security and preparedness grants, as well as working with the county and municipal governments on all issues related to homeland security preparedness and response.

While the Domestic Security Preparedness Task Force was subsumed into the new Office, the other offices that dealt with homeland security, including law enforcement, were not made part of the NJOHSP. However, the Office was granted the same powers granted to the Department of Law and Public Safety.[45]

Implications

Regulating on-site chemical security is an intricate process, involving multiple levels of government, as well as private sector representatives. Under the current legal framework, chemical facilities in New Jersey are subject to a series of environmental, worker safety, health, and public awareness requirements. Further complicating the process is the fact that federal and state laws are often not in coordination with one another, each one defining its own parameters even though they seek to achieve the identical goals. Some laws even seem to contradict one another, as is the case with OPRA and NJDSPA.

New Jersey Chemical Plant Security: General Trends

This section provides summary information and trends regarding the chemical facilities in northern New Jersey chosen as a snapshot of the chemical security situation in the most vulnerable part of the State. Please see the Methodology section for the reasons these particular facilities were chosen, and Appendices 9-12 for a breakdown of the individual facilities and detailed information regarding the security measures and hazardous chemicals at each facility.

The facilities examined in this report all have security plans and measures of varying degree in place. Several facilities have extensive systems, including active measures designed specifically to detect and prevent accidents, passive measures designed to contain accidents and prevent them from having any impact offsite, emergency response plans involving local, state, and in some cases federal responders, as well as employee participation programs. According to documents they are required to file with the Environmental Protection Agency and publicly available information, other facilities have only minimal systems in place, involving merely passive mitigation techniques.

Best Practices

Before assessing the overall trends in the facilities' security plans, it is helpful to examine ideal best practices. Some of the following security techniques are required by state law, federal law, or both (including the recent Department of Homeland Security {DHS} regulations); while others, set by internal policies, provide a more stringent protection of the facility, area, and environment than the legally mandated requirements.

First, ideal facilities should have significant active mitigation techniques in place. These should include (varying depending on the type of chemical on-site) monitoring systems that check the conditions of the storage facility and "sniffer" systems that detect any chemical releases, emergency shut-down systems, sprinklers and/or deluge systems to extinguish any fires, chemical or otherwise, and neutralization systems that are intended to break down the potentially toxic or noxious chemicals that are either used or produced. In addition, passive security measures, including dikes and berms designed to prevent spilled chemicals from escaping, blast walls and firewalls designed to contain explosions, and physical space to minimize offsite (and on-site) effects, should ideally be employed to contain accidents.

From a specific physical security standpoint, new regulations require higher risk facilities to install closed-circuit television systems that law enforcement personnel can monitor. In addition, perimeter-hardening techniques should be employed, including maintaining distance between the chemical storage facility and publicly accessible roads or highways, security fences, concrete barriers near the chemical storage site itself, and protection against both aerial and water-borne attack. All potential entrances to the facility should be monitored using guard booths and lights.

The safety and security systems employed, many of which would be effective both against accidental and malicious release of chemicals, should be independently audited on a regular basis. These audits should check the effectiveness and relevance of the system, and determine whether other vulnerabilities exist. Lessons learned from these audits should in turn be incorporated into the system.

In addition, the safety and security system should use the facility's employees. The Toxic Catastrophe Prevention Act (TCPA) and the Occupational Safety and Health Administration's

(OSHA) Material Safety Data Sheets (MSDS) mandate labeling of chemicals and require everyone who works at the facility to have access to information about the chemicals stored on-site. In addition, employees should know the specific details about the risks they pose. Furthermore, employees should be made aware that they have access to this information.

All personnel – including those who handle the potentially toxic or noxious chemicals as well as those who do not, such as the facility's management – should be required to undergo emergency response training upon employment, with periodic refresher courses. This training should be provided by an outside body, and it should include aspects of the emergency response plan - both how to react to an emergency and who to contact (both on and off the plant).

Finally, all facilities are currently required to have an emergency response plan in place in the event of a spill or release. In addition to the planning currently required, these plans should involve all relevant state, local, federal and private sector officials – including the fire department, police, HAZMAT team, utilities companies, NJDEP, health care providers (including paramedics), National Guard, etc. The plans should also involve explicit directions on what to do in the event of a spill, including who needs to be contacted, what person from the facility should do so, and how the plant's emergency responders (if any) are to react.

The facility should not only share this plan with the relevant local officials, but they should also regularly invite them onto the facility in order to better acquaint them with personnel, the substances on-site, and potential risks. In addition, there should be regular drills – both comprehensive and "tabletop" – involving all of the relevant actors. Again, lessons learned from these drills should in turn be incorporated into the plans.

Patterns

Two basic mechanisms, used to compare the safety and security of facilities, are the size of the company (or in the case of facilities owned by other companies, the holding company size) and the size of the population theoretically endangered in the event of a release. In both cases, facilities examined in this report range from extremely large to very small.

The largest danger posed by a potential release is to a population of 12 million who live within the risk area of the Kuehne Chemical Company. Conversely, for seven of the nineteen facilities there were no residential areas within the theoretical contamination zone.

In terms of company financial size, two facilities are owned by General Electric, which reported $149 billion in sales in 2006. On the other end of the spectrum one facility had $710,000 in sales in 2005. Please note that 2006 financial data were not available for all companies, hence most recent data are listed in Appendix 8 and noted by year; however, size comparisons across the sample are still relevant.

It should be noted that facility safety and security data were collected primarily from the federal RMPs provided to the EPA, as well as a few publicly available documents provided by the companies themselves. As such, it was not possible to completely assess each facility's security plan in depth. However, the lack of accessible information raises serious concerns in and of itself. While on one hand safeguarding information is prudent to prevent potential terrorists from gaining access, a lack of security clearance for many federal, state, and especially local officials who are involved in the preparedness and response, results in their inability to properly prepare emergency plans and/or respond quickly in a chemical release emergency.

Active Mitigation Techniques

Facilities employing active mitigation techniques tend to be the facilities that endangered the largest number of people. However, no shared standard exists among the large facilities in terms of techniques used. The facilities theoretically endangering few people do not rely extensively on active mitigation techniques. There is no distinction between large and small annual revenue companies.

Examining the facilities that could theoretically endanger the largest number of individuals – specifically Kuehne, Infineum, New York Terminals, and Bayonne Plant Holding – reveals a small number of trends. First, these companies tended to extensively use active mitigation techniques, even though they differed in terms of which techniques they adopted. All of the facilities maintain written standard operating procedures (SOPs) for safety and security. None of the facilities, however, provide significant detail on the context of the SOPs to the public. All of the facilities also have at a minimum, a basic automatic monitoring systems in place to determine whether chemical releases have occurred ("sniffer" systems and the like). However, certain basic active mitigation systems – such as sprinkler/deluge systems, and emergency shutdown systems – are not present across the board. Finally, some of the facilities – Infineum and Bayonne Plant Holding – indicated regular inspection, maintenance and audits of their safety and security facilities; the other two facilities did not.

Similarly, facilities that could theoretically endanger fewer individuals – AGC Chemicals, ConocoPhillips, and General Chemical – employed active mitigation techniques, but differed in terms of the specifics. While AGC reports having automatic shutoff systems, ConocoPhillips and General Chemical do not. AGC and General Chemical report utilizing sniffers and other monitors, while ConocoPhillips does not. None of the companies reported having deluge or sprinkler systems. All facilities, however, reported regular maintenance, audits of their systems, and hazard assessments.

The facilities that would endanger the fewest people – in all cases there are no residential areas near by – tend to rely more, although not exclusively, on passive safety and security measures. Adco Chemicals, for instance, reports only one active mitigation technique -- a sprinkler system. Benjamin Moore & Company reports only monitoring and detection systems (although it also reported having investigated and implemented inherently safer technologies for many years). CHEM Fleur made use of sprinkler systems and excess flow valves. The only significant exception is the Cogen Technologies (Linden Venture), which follows the General Electric safety and security protocol. Most of the facilities did not report whether or not they conducted audits or inspections of their safety and security systems.

Making use of more active mitigation techniques does not, with the exception of Cogen Technologies, appear to have a significant correlation with the financial well being of the facility or company. Kuehne Chemicals makes use of a significant number of active mitigation techniques despite the fact that its net sales were $34.2 million in 2006. In contrast, Benjamin Moore – owned by Berkshire Hathaway, which had net sales in 2006 of $81.663 billion – relied less on such techniques.

Passive Mitigation Techniques

Very few of the facilities reported use significant passive mitigation techniques. Those that did were almost exclusively the facilities that would endanger the fewest people. There is no distinction based on the annual revenue of the company that owns the facility.

None of the facilities that would endanger the largest number of individuals reported any significant passive mitigation techniques beyond the use of basic dikes. It is uncertain whether this suggests that such systems are not in place, or whether they did not deem them significant enough to mention in RMPs.

Some of the facilities that would endanger fewer people likewise reported only basic passive mitigation techniques, such as dikes.

The facilities that would in theory endanger no residential areas tended to report more passive mitigation techniques. Muralo reported, for instance, both dikes and berms. Adco reported making use of fire walls, while CHEM Fleur reported that the storage facilities that held their flammable material was surrounded by empty buildings and undeveloped land, and the storage tanks themselves were surrounded by Jersey barriers. Welco-CGI also reported that the buildings that held their hazardous materials were designed in such a way as to diminish the likelihood of an accidental release.

Physical Security

We were unable to obtain information on the plant's physical security because this information is not in the federal RMP. We also attempted to contact representatives at each facility but they were unwilling to discuss these topics with us. Hence, general trends are not available.

Employees

All facilities for which we were able to obtain information, reported both initial training and regular refresher training for either "many" (IMTT) or all employees. This training covers emergency response, handling of dangerous substances, and general familiarity with the facility. In some instances trainings are based on the employee's position (Bayonne Plant Holding, Cogen Technologies, IMTT), although both maintenance personnel and administrators must specifically qualify to use ammonia systems and take emergency response training even if it is not explicitly related to their jobs.

In most of the facilities for which we were able to obtain information, employee feedback was considered in safety and security system changes. For example, ConocoPhillips employees participate in hazard review and incident investigations, undergo self-assessments, and have annual drills (separate from the drills of emergency response plans).

We were unable to obtain information on the carrying out of background checks of employees.

Emergency Response Plans

All facilities are required by law to have emergency response plans. Nearly all facilities for which we were able to gather information had at least minimal plans in place (although it is particularly troubling that we were unable to obtain information about the emergency response plan for Kuehne Chemical). The extent of these plans varies, however, ranging from basic contact with the local fire department to extensive annual exercises including state, local, and in some cases federal first responders.

The most minimal emergency planning tended to come from smaller facilities. For example, CHEM Fleur indicates contact with the Newark Fire Department, but no specific plans

exist, nor did they engage in any regular drills with first responders or others who might be involved in an incident. Beyond this, however, there is no correlation between the sizes of the facility and/or company and the extent of the emergency response plan. Some facilities, such as General Chemical, coordinate with the local Office of Emergency Management (OEM), hold periodic meetings with first responders, and conduct drills with responders that would be involved in an incident. But some of the smaller companies (both in revenues and number of people theoretically endangered) – such as Ashland – likewise coordinate with local first responders, conduct drills, and also invite the relevant first responders to the facility to better familiarize them with the plant's layout, risks, personnel, and equipment.

The larger companies in terms of finances tend to have the most extensive emergency response plans, although they do not necessarily develop them explicitly in coordination with the local first responders. General Electric, at both the Cogen Technologies facility and the Bayonne Plant Holdings facility, coordinates with the local fire departments, providing them a copy of the emergency response plans. This includes information on the necessary procedures, responses to a release, notification requirements, evacuation procedures, and health data. Similarly Infineum – while a midsize company – has an extremely extensive emergency response plan, including information on on-site response capabilities and medical information. According to the company, the plan is drilled frequently.

Stakeholders

The following section provides a brief introduction to the primary stakeholders in New Jersey chemical security. Stakeholders are defined as agencies, individuals, or institutions with a direct or indirect interest in the planning and preparedness for, response to, and/or recovery from chemical incidents. Responsibilities and coordination efforts of these groups, agencies and organizations are discussed in further detail in the preparedness and planning, response, and recovery sections of this report.

Local Government and Entities

Citizens

Citizens in the municipality of chemical facilities are clear stakeholders of chemical security. Citizens in neighboring municipalities or states are stakeholders as well. Under the Emergency Planning and Community Right-to-Know Act (EPCRA) and the New Jersey Open Public Records Act (OPRA), citizens have the right to know certain information regarding chemical products stored within chemical facilities.[46] Prior to 9/11, more detailed facility information, such as facility Risk Management Plans (RMPs), was accessible to the general public. Post 9/11, however, community access to chemical security information has been superseded by security concerns. The 2001 New Jersey Domestic Security Preparedness Act specifies that OPRA standards do not apply to chemical facilities.[47]

Local Emergency Planning Committees

The 1986 Superfund Amendments and Reauthorization Act (SARA), specifically Title III or the EPCRA, requires Local Emergency Planning Committees (LEPCs) to be created for every municipality within a state. LEPCs must develop community emergency all-hazards response plans and provide information regarding chemicals in the community to citizens.[48] LEPCs exist in each of New Jersey's 566 municipalities and in each of 21 counties.[49]

Local First Responders

Local first responders include all emergency personnel who are responsible for protecting life, property, evidence and the environment in the early stages of a chemical response.[50] These stakeholders may include the local fire department, police department, public health officials, emergency medical responders, public utility officials, and other skilled support personnel.[51] New Jersey local first responders maintain operational authority on-site and are also involved in all stages of planning and preparedness. In New Jersey, the response of local first responders is often coordinated by the LEPC emergency response plan and structured through personal and professional networks.[52]

State Government

Infrastructure Advisory Committee

Created by the NJDSPTF in 2002, the Infrastructure Advisory Committee (IAC) represents senior managers from the 20 industrial sectors that the Task Force has determined contribute significantly to the New Jersey economy and quality of life, including the chemical sector. The IAC oversees subcommittees that developed the "Best Practices Standards" for

security in each sector. Best Practices Standards cover issues including target hardening and vulnerability/mitigation measures, crisis response, contingency and continuity planning, protocols for communications, background checks, and adjustments to security measures dependent on changing realities.[53] Inspections are carried out by the NJDEP.

New Jersey Department of Environmental Protection

The New Jersey Department of Environmental Protection (NJDEP) was created in 1970 and is charged with environmental management, pollution protection, and regulation.[54] As such, NJDEP is highly involved in chemical security policy in New Jersey. Under Domestic Security Preparedness Task Force mandate, NJDEP is the lead agency for implementing chemical sector Best Practices Standards. NJDEP administers the implementation of Best Practices through regulatory powers, partnerships with private and public stakeholders, and verification inspections. NJDEP also administers the TCPA, Clean Air Act 112 (r), and EPCRA reporting requirements in New Jersey.[55] In addition to their lead role in planning and regulation, NJDEP has a strong presence during emergency response through their Bureau of Emergency Response.[56]

New Jersey Department of Health and Senior Services

New Jersey Health and Senior Services (NJDHSS) oversees the numerous regulations relating to public health in New Jersey.[57] NJDHSS plays a critical support role in chemical incident response, as first responders access NJHSS records to determine how to respond to chemicals stored on-site during chemical releases.[58]

New Jersey Domestic Security Preparedness Task Force

The New Jersey Domestic Security Preparedness Task Force (NJDSPTF or Task Force) was established by the 2001 Domestic Security Preparedness Act and coordinates the homeland security related activities throughout the State. The Task Force oversees the implementation of homeland security and domestic preparedness policy in 20 sectors within New Jersey (one of which is the chemical sector).[59] The Task Force also works with government agencies at all levels (including federal), and is responsible for setting overall policy for responding to chemical releases through the implementation of chemical sector Best Practices Standards.[60]

New Jersey Office of Emergency Management

The New Jersey Office of Emergency Management (NJOEM) was created in 1980 to absorb the powers and duties of the Office of Civilian Defense Director in the Department of Law and Public Safety, which had been established in 1979 in response to the creation of FEMA in the federal government.[61] NJOEM is responsible for planning, training, and responding to statewide catastrophes, as well as the coordination of all operations during emergency responses such as chemical spills or explosions.[62] NJOEM offers free emergency management training to state and local officials, emergency medical teams, and other relevant professionals.[63]

New Jersey Office of Homeland Security and Preparedness

The New Jersey Office of Homeland Security and Preparedness (NJOHSP) was created in March 2006, through Executive Order No. 5 by Governor Corzine. The office is mandated "to administer, coordinate, lead, and supervise New Jersey's counter-terrorism and preparedness efforts."[64] Generally, NJOHSP works to coordinate policy across multiple agencies and levels of government, set overall preparedness and planning policy, and disperse grant funds.[65] In terms of chemical security policy, the director of the NJOHSP serves as the chair of the Domestic

Security Preparedness Task Force, coordinates with the NJOEM, and liaises with interstate and federal partners. [66]

State Emergency Response Commission

EPCRA requires that each state have a Statewide Emergency Response Commission to coordinate all-hazards planning and response functions of LEPCs, coordinate plans and resources on a regional basis, and implement EPCRA provisions within the State.[67] Thus, SERCs are key planning and response stakeholders in chemical security. The NJSERC is jointly chaired by the NJDEP and the NJOEM. [68]

County and Regional Government

HAZMAT/ Chemical, Biological, Radioactive, Nuclear, and Explosives Teams

HAZMAT teams are generally based at the municipal level in New Jersey and are critical responders during chemical incidents.[69] In an effort to promote greater regional planning and more economical pooling of resources, New Jersey has pursued the creation of county CBRNE teams over the past half-decade, as opposed to building up individual municipal HAZMAT teams.[70] Currently, 21 CBRNE teams exist in New Jersey and are aligned with each county. Municipalities call on these teams during response to chemical incidents. CBRNE teams most commonly collaborate with NJDEP and NJOEM.[71]

Interstate Stakeholders: New York City and New York State, Delaware and Pennsylvania

While northern New Jersey is particularly vulnerable to a chemical release because of the high concentration of such facilities, the impact of a release would likely cross borders into neighboring States – including New York, Delaware, and/or Pennsylvania. New York City, one of the most densely populated metropolitan areas in the United States is especially vulnerable, as is Pennsylvania since Philadelphia is right across the border. All of the neighboring jurisdictions can be considered direct stakeholders to chemical security planning and response in New Jersey.

Port Authority of New York and New Jersey

The Port Authority of New York and New Jersey, a bi-state agency created in 1921, oversees all the bridges, tunnels, bus terminals, airports, Port Authority Trans-Hudson service, and seaports that are crucial to both New York and New Jersey trade and transportation. [72]

With jurisdiction over the land and sea surrounding the Statue of Liberty out 15 miles, the Port Authority oversees the I-95 stretch that covers the chemical facilities examined in this report. In this area the Port Authority manages all transportation methods, including the transportation of hazardous materials. The Port Authority has its own police force consisting of 1,600 officers with bi-state authority and a HAZMAT team that works with both the NYPD and the New Jersey State Police.[73] The Port Authority exercises and interacts regularly with New Jersey, New York State and New York City, and could potentially play a facilitating role in interstate coordination.[74]

Federal Government

Department of Health and Human Services

The United States Department of Health and Human Services was initially organized in 1953, as the Department of Health, Education and Welfare; it was reorganized into DHHS in 1979. DHHS is responsible for "improving the health and well-being of America."[75] DHHS agencies involved in chemical facility security include the Agency for Toxic Substances and Disease Registry. DHHS works with OSHA to ensure the effects of emissions from the chemical facilities do not decrease the well-being and health of employees, residents, and other working professionals in the surrounding community.[76]

Department of Homeland Security

The Department of Homeland Security (DHS) became operational in 2003 and is responsible for integrating federal policies and agencies related to homeland security. DHS is also responsible for coordinating with state and local governments, providing grant funds, and offering train-the-trainer capabilities to help localities and states increase first responder capacity.[77] Additionally, its National Response Plan outlines a broad all-hazards approach to domestic incident response and establishes coordination protocols for specific types of events, including chemical incidents.[78] Critical infrastructure, such as chemical facilities, is addressed through DHS' National Infrastructure Protection Plan.[79] DHS also provides strategic support through the Homeland Security Information Network and the National Incident Management System.

Department of Transportation

The Department of Transportation (DOT) was formed in 1966 and is responsible for developing and maintaining the United States' transportation system. Several of DOT's agencies are involved with security at chemical facilities. The Federal Aviation Administration (FAA) regulates airspace, especially above sensitive areas. The National Highway Traffic Safety Administration (NHTSA) oversees highway systems. Pipeline and Hazardous Materials Safety Administration (PHMSA) focuses on the transportation of dangerous materials.[80]

Environmental Protection Agency

The Environmental Protection Agency (EPA), formed in 1970, is responsible for overseeing issues related to environment protection. EPA collects data on chemicals located in, and releases from, the facilities under the CAA and EPCRA. Most oil and petroleum companies work with the EPA to minimize any accidents, as do chemical facilities. [81]

Federal Bureau of Investigation

The Federal Bureau of Investigation (FBI) was formed in 1908, and today focuses on national protection, defense against terrorist attacks, and serves as the principle law enforcement body upholding federal law. FBI also assists state, local, and international law enforcement agencies in investigating violations of criminal law.[82] Additionally, the FBI maintains regional Joint Terrorism Task Force (JTTF) centers and Field Intelligence Groups (FIGs) that regularly interact and share intelligence with New Jersey-based analysts and the Regional Intelligence Operations Center (RIOC).[83] The FBI is generally involved more in prevention of attacks and in investigations resulting from attacks.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) was created by Executive Order in 1979 as an independent agency (combining the work of other emergency response agencies and offices) but was placed under the jurisdiction of the DHS in 2003.[84] FEMA is responsible for responding to all types of disasters anywhere in the United States, including hazardous material spills resulting from either a terrorist attack or accident. FEMA's primary role is coordinating the response of the federal agencies during emergency response.[85] During a large-scale chemical emergency requiring federal mobilization, FEMA would take operational lead.

United States Coast Guard

The United States Coast Guard (USCG) was founded in 1790 and was placed under the purview of DHS in 2003.[86] As one of the nation's five armed services, USCG focuses on Maritime Safety, Security, Mobility, National Defense, and Protection of Natural Resources.[87] USCG protects all bordering coast, ports, and inland waterways, including Port Elizabeth near Newark.[88] Given the location of many facilities near Newark Bay, the USCG would be the initial responders to threats entering the area through surrounding ports and other border entrances. New Jersey has two Coast Guard districts and officials meet and exercise regularly with Coast Guard planners.[89]

Private/Nonprofit Entities

American Chemistry Council (ACC)

The American Chemistry Council (ACC) is a not-for-profit organization, founded in 1872, that represents companies that produce goods used to enhance and protect the public's environment, security, and general health.[90] As such, chemical security is a main priority of the ACC. ACC has 128 members and represents over 2,000 facilities. In January 2002, the board of the ACC initiated its Responsible Care® Security Code, which was used by New Jersey to formulate the mandatory chemical sector Best Practices Standards. The Responsible Care® Security Code, along with vulnerability assessments required of all members, are means used by the ACC to regulate chemical facility risk. Additionally, ACC runs the CHEMTREC chemical incident national database.[91]

Chemical Facilities

New Jersey chemical facilities are prominent stakeholders in chemical security. Facilities have a vested interest in maintaining strong security precautions and emergency planning, as well as open relationships with local and state stakeholders.[92] These relationships may vary by community and facility. Federal and state regulations, such as the CAA 112(r), EPCRA, and TCPA require each facility to report inventory totals for toxic chemicals, site vulnerability assessments, and create emergency response plans.

Information Systems

This section is a list and description of chemical security relevant and important databases that are utilized by various agencies at the federal, state, and local levels. Each database is extensive to the audience it tailors; however, many of these databases are not interconnected, and often duplicative. Additionally, clearance for access is always an issue.

CHEMTREC

CHEMTREC was created by the ACC in 1971 in order to facilitate information sharing between chemical facilities (including non-ACC member facilities). After 9/11, CHEMTREC was coordinated with the FBI and DHS. CHEMTREC provides information and assistance in case of a spill, leaks, fires, explosion, and any other emergencies.[93] CHEMTREC shows various trends and patterns in chemical facilities and incidents across the Nation.[94]

Chemical Vulnerability Terrorism Information

Created by the interim final regulations of the Homeland Security Appropriations Act of 2007, DHS established Chemical-Terrorism Vulnerability Information (CVI) in order to help the industry protect classified information.[95] However, it remains unclear how to provide secure access to stakeholders. DHS may ultimately need to step in to provide the clearance for local first responders to permit them access to the necessary information.

E-TEAM

E-TEAM is crisis management software that was created in 1998. E-Team is used to better prepare, respond, and eventually recover from a disaster. It has a wide range of uses including: "emergency management, homeland security, public health, business continuity, disaster preparedness and recovery, event management, and training and exercises."[96] In New Jersey, the software is used for both catastrophic incidents as well as smaller incidents to connect the NJOEM with all 21 counties and state agencies, including the Department of Health and Senior Services, Department of Military and Veterans' Affairs, Department of Environmental Protection, Department of Transportation, the Port Authority of New York and New Jersey, and the New Jersey National Guard.[97]

Homeland Security Information Network

The Homeland Security Information Network was established in 2004. HSIN is an interactive, wheel-and-spoke, computer-based system that is used to "provide situational awareness, facilitate information sharing and collaboration with homeland security partners throughout the federal, state, and local level, provide advanced analytic capabilities, [and] enable real time sharing of threat information."[98] All information sharing is processed real-time. New Jersey officials disagree on its utility.

HSIN-Secret

Due to the criticism that DHS received during and after the 2005 hurricane season, the HSIN system was reorganized in 2007. In previous versions of HSIN, specific problems occurred relating to security clearances of individuals on the network. Thus, HSIN was split into two sections. The unclassified information is sectioned into HSIN-Intelligence and the classified information into HSIN-Secret.[99]

National Incident Management System

The National Incident Management System (NIMS) was created in 2003 by Homeland Security Presidential Directive 5 and placed under the jurisdiction of FEMA. NIMS provides a "unified approach to incident management, standard command and management structures, and emphasis on preparedness, mutual aid and resource management."[100] NIMS includes a standardized set of "guidelines, protocols, systems, and technologies" used in order to react to an incident efficiently and effectively. [101] All federal agencies are required to use NIMS for response operations.[102]

New Jersey Emergency Management System

New Jersey Emergency Management System (NJEMS) is a statewide, real-time database that shares information relating to environmental protection and management, including information on chemical storage collected through TCPA.[103] NJEMS was most recently updated in July 2005. NJEMS contains discrete information relating to chemical storage and hazards, but does not include information relating to security measures on-site at the facility.[104]

Regional Information Joint Awareness Network

The Regional Information Joint Awareness Network (RIJAN) facilitates agency communication and collaboration in operational response to large-scale incidents in the Northeastern United States, including chemical incidents that might cross jurisdictions. Most importantly, this system allows multiple users to coordinate information sharing and construct a single understanding of site awareness.[105] Involved jurisdictions include: New York State, New Jersey, New York City, the Metropolitan Transportation Authority, the Port Authority, DHS, and USNORTHCOM. It has been used for both political and operation tracking since some legal jurisdictions overlap each other.[106]

Putting New Jersey Chemical Security in Context

This section provides a brief overview of the unique policy coordination and homeland security culture in New Jersey, both of which directly affect chemical security planning and response. The home rule system of governance in New Jersey and its emphasis on the authority of municipalities has significant affects on general planning, response, and information sharing in the State.

Home rule

Governance and Reliance on Personal Relationships

The home rule system of governance in New Jersey disperses power at the local level, providing a great deal of authority to municipalities. Municipalities and counties possess not only the power that is expressly authorized by their respective Constitutions or Charters, but also any and all authorization needed to carry out those expressly granted powers. This system is based on Article IV, Section VII (11) of the New Jersey Constitution:

> "The provisions of this Constitution and of any law concerning municipal corporations formed for local government, or concerning counties, shall be liberally construed in their favor. The powers of counties and such municipal corporations shall include not only those granted in express terms but also those of necessary or fair implication, or incident to the powers expressly conferred, or essential thereto, and not inconsistent with or prohibited by this Constitution or by law."

Within the context of homeland security, home rule results in operational and planning responsibilities being spread across numerous jurisdictions. The State – under the authority of the 2001 Domestic Security Preparedness Act and through the leadership of the New Jersey Domestic Security Preparedness Task Force – sets general homeland security policy and provides policy coordination and guidelines.[107] Additionally, the State is responsible for setting and executing policy related to preparedness.[108] However, planning for response to critical incidents continues to be handled and orchestrated at the municipal level under the pre-existing emergency response systems facilitated by Local Emergency Management Committees (LEPCs) and chemical facilities.[109] Many potential chemical incidents could theoretically cross the borders of towns, counties, and states, making coordination between local plans and first responders in multiple jurisdictions absolutely critical.

In New Jersey, coordination and communication at the municipal level is often conducted informally. It relies on leveraging existing professional relationships and planning networks, and as a result differs greatly between localities.[110] Furthermore, each town and county has its own set of first responders who will initially react to any incident. Official memorandums of understanding (MOUs) that lay out the roles of different responders in the event of an emergency are not common. However, while formal coordination agreements may be lacking, a strong tradition of mutual aid, professional networks, and relationships means that local responders are often supplemented by neighboring municipalities and counties at the request of the local incident commander.[111] This leads to greater confidence in response capabilities and increases cooperative relationships, but at certain times it might be beneficial to have MOUs to better utilize resources, particularly regionally based ones such as Chemical Biological Radiological Nuclear and Explosive (CBRNE) teams.

Under the home rule model of chemical emergency response, municipalities may request assistance from neighboring municipalities and/or counties prior to requesting assistance from the State.[112] Upon receiving county and/or state resources, the local incident

commander remains in control of these resources until he or she officially relinquishes command.[113] Only if the situation is sufficiently drastic that the local first responders are unable to mitigate it and expressly request state help, or the Governor intervenes, will the State take control.[114] Once command is relinquished, a Unified Incident Command is set up with the New Jersey Office of Emergency Management (NJOEM) as the lead statewide coordinating body. The New Jersey Department of Environment Protection (NJDEP) Bureau of Emergency Response becomes the lead responding agency for most incidents, but still subordinate to NJOEM.[115] Other NJDEP programs may assume a lead response role depending upon the incident (Forest Fire Service for a fire on state owned lands, Dam Safety for dam failure and flooding).[116] In the event of a rapidly evolving chemical incident, the home rule system may result in confusion that delays response if local and state responders are not effectively coordinated.[117]

Comparison – New York City

The home rule system, and in particular the mutual aid systems that connect the first responders in New Jersey, is in significant contrast to the emergency preparation and response plans that are in place in some neighboring jurisdictions. These contrasts are most notable in comparison with New York City. In many respects similar to a state in how it acts during crisis situations, New York City has an emergency response system centered in the New York Police Department (NYPD). Surrounding the NYPD in a regimented, vertical command structure are the numerous other support agencies that are involved in chemical security planning and response. As with New Jersey, New York City's system is not entirely codified, but principal actors are more clearly identified and command of the entire system is more clearly centralized.[118]

Incident Preparedness: "All-Hazards" Planning versus Security Threat Planning

New Jersey's concentration on all-hazards rather than threat based planning is somewhat at odds with DHS' historical focus on terrorism. However, DHS is to move toward an all-hazards approach with the adoption of the National Response Plan and NIMS. Under an all-hazards framework, consequence-based planning is used to manage the consequences of all events, rather than attempting to secure against specific security threats. Hazard identification, risk assessment, and consequence management is used to planned for and mitigated against the risks and effects of potential harmful events. In this sense, chemical disasters due to human error, terrorism, or hurricanes are planned for equally. All-hazards planning thus provide a way around the fundamental question as to whether homeland security can encompass non-terrorism related events.[119]

For example, all-hazards assessments include how to better construct public health systems to respond to an epidemic or significant release of chemicals resulting from an accident or attack, or how to strengthen public utilities so they were less likely to be knocked off-line by significant weather storms or terrorist attacks, to name just two of many potential planning scenario tradeoffs which are avoided through the use of all-hazards planning. One public official we spoke with said, "If you look at consequences it doesn't matter if [the event] is the result of a bomb in a truck or just human error, it's not so much cause as consequence."[120] In embracing an all-hazards or consequence-based planning framework, homeland security planning mitigates the consequences of chemical events, rather than the initial cause of the event.

The all-hazards approach in the State of New Jersey is codified in part in the *State of New Jersey Hazard Mitigation Plan.*[121] In 2000, the NJOEM produced *Building a Safer New Jersey: the State of New Jersey Hazard Mitigation Plan*, a hazard and vulnerability analysis that identified threats to state security and assessed them based on the risk they pose to human life, property, and economy.[122] Risks were primarily focused on natural disasters such as storms, floods, geological events, etc., although it also included terrorist incidents. However, a limited budget and narrow timeframe prevented the report from being completed. The report was revised extensively in 2004 and again in 2005, although the assessment of potential threats is still incomplete according to some independent observers.[123]

New Jersey's revised all-hazards mitigation plan is extensive. Elements include public awareness and education campaigns (informing local officials, inserting evacuation plans in telephone directories, etc.), pre-disaster mitigation grants, risk management programs from all state facilities, initiatives to regulate coastal land use, specific building codes, "contra flow" evacuation agreements, continuity of government and business plans, and a statewide warning system, among others.[124] These policies are not typically designed to mitigate a specific threat, for instance, strengthening the public health system is beneficial in the event of an epidemic as well as a toxic incident and has the beneficial spillover effect of bettering public health systems overall.[125]

In addition, the state requires that chemical facilities meet a number of regulations that are applicable to both accidental releases and terrorist incidents. Examples include the chemical Best Practices Standards and the Inherently Safer Technology requirements under the New Jersey Toxic Catastrophe Prevention Act (TCPA).

In contrast, although DHS' National Response Plan (NRP) is intended explicitly for general domestic incident management, the focus of its implementation is primarily on terrorist incidents. For instance, of the 15 National Planning Scenarios created by DHS, 12 involve terrorist attacks.[126] While Homeland Security Presidential Directive 8 requires an all-hazards approach to national preparedness, it also places emphasis on terrorism; this emphasis in turn impacts federal funding for state and local actors. Furthermore, the mission statement of DHS does not mention natural or accidental disasters, despite the presence within DHS of offices that respond to both (such as the Federal Emergency Management Agency).[127]

State and local first responders have found the emphasis on terrorism at the expense of a true all-hazards approach detrimental, particularly considering the likelihood of an accident or natural disaster vis-à-vis a terrorist incident. This has had a significant impact on operations – for example, a 2005 planned all-hazards exercise simulating a major hurricane hitting Louisiana (following up on a similar exercise the previous year) was called off because of lack of funding.[128]

Planning and Preparedness

The operation of chemical facilities is associated with inherent risks that stem from the fact that such facilities process and store potentially hazardous materials.[129] Security risks may vary greatly by individual facility based on what chemicals are produced and stored, plant size, etc.[130] Furthermore, the threat of chemical terrorism and deliberate release, shown by the recent use of "chlorine bombs" in Iraq and the reported discovery of chemical trade publications in Al Qaeda safe houses, add additional dimensions of risk to this equation.[131]

Planning and preparedness mechanisms are critical and necessary steps toward instituting effective chemical facility security measures. The concepts of planning and preparedness, and the requisite levels of information sharing that they require, are diverse and can be incorporated into state, local, and interstate/regional security models. Planning and preparedness can range from the formulation of specific official documents and authorities, to the regular meeting and exercising of chemical security stakeholders, to the open exchange of intelligence through fusion centers. Generally, New Jersey has adopted strong planning mechanisms focused more on building upon existing state resources, professional relationships, and functions, rather than on the compilation of written plans. Varying levels, and functional responsibilities, of New Jersey chemical security planning and preparedness exist at the local, state, and interstate/regional levels. The following section presents and analyzes the myriad of planning and preparedness initiatives underway in New Jersey.

Chemical Security Planning in New Jersey

The State of New Jersey is at risk for both accidental and deliberate release of dangerous chemicals, due to its dense population and numerous chemical facilities.[132] As such, New Jersey local, county, and state-level homeland security and emergency response agencies emphasize planning, preparedness, and mitigation as central components to both the general concept of homeland and for chemical security specifically.[133]

New Jersey has largely built upon existing professional relationships, networks, institutions, and systems in its efforts to institute chemical security planning and preparedness.[134] Due to this approach, and to the previously discussed emphases on home rule and "all-hazards" security, chemical security planning in New Jersey tends to be contextual and varied. A great deal of planning occurs at the local level, while general coordination and enforcement takes place at the state level, such as through the 2005 Best Practice Standards. Additionally, New Jersey has taken an increasingly "collaborative approach to planning, incorporating methods such as a local and statewide planning bodies, statewide security task force, formal information sharing bodies, such as fusion centers, and repeated multi-agency exercising to build planning and preparation partnerships across state and local agencies."[135]

Generally, this report finds that chemical security planning and preparedness within New Jersey is performed on three levels of government: local, state, and interstate/regional. In each level, planning may be carried out and information shared between any number of critical stakeholders and actors in a vertical and/or horizontal fashion. For instance, locally-created emergency response plans in New Jersey are routinely shared with both state emergency response and homeland security agencies, as well as chemical companies within the municipality – this would be an example of local chemical security planning with both vertical (sharing with state agencies) and horizontal (sharing with local chemical facilities) information

sharing. As information sharing is a critical and necessary aspect to effective planning, this report focuses both on defining existing chemical security planning systems and networks in New Jersey, and on how information is shared within these systems in order to facilitate planning.

Facility Regulation and Information Distribution: What Information Is Accessible?

The legal framework regulating chemical facilities – at both the federal and state levels – requires that each individual facility submit a number of reports concerning chemicals and other regulated materials kept on-site, information about efforts to prevent accidental releases, efforts to mitigate those releases, and site-specific security information. For more detailed information on each of these requirements, please refer to the Legal Framework section of this report. While in some instances the information in these reports is similar or identical to information in reports filed to other government agencies (at all levels), this is not always the case. Therefore, this section assesses which offices, agencies, and levels of government maintain and hold what reported information.

Prior to 9/11

Regulations of the chemical sector took on new meaning in the wake of the Bhopal chemical catastrophe. The largest chemical disaster in history, it resulted in approximately 3,000 immediate deaths, as well as between 15,000 and 22,000 were ultimately attributable to the release.[136] A proliferation of regulatory laws appeared in the U.S. over the next few years.

Initial regulations of New Jersey chemical facilities were issued by the State of New Jersey. In 1986 the State passed the Toxic Catastrophe Prevention Act (TCPA), requiring that chemical facilities that produce or contain extremely hazardous substances (EHSs) submit Risk Management Plans (RMPs) to the State. RMPs include the facility's standard operating procedures, information about safety reviews, maintenance, training, accident investigation, and emergency response plans (ERPs). These reports are still filed to NJDEP and technically are available to the public through state reading rooms (although currently their release is partially blocked by security concerns and vetting by NJDEP).

Also in 1986, the federal government passed the Environmental Protection Community Right-to-Know Act (EPCRA), requiring RMPs to be submitted to the Environmental Protection Agency (EPA). These plans primarily focus on offsite consequence analysis of a spill or other release from the facility, basic safety systems in place to mitigate the threat, and emergency response. Federal RMPs are maintained by the EPA and are available to the public via federal reading rooms, albeit supervised.

In 1986, Occupational Safety and Health Administration (OSHA) became more active as well in mitigating chemical facility risks, requiring Material Safety Data Sheets (MSDSs) from all facilities using, storing or producing threshold amounts of hazardous materials. These documents are required to be maintained at the facility.

The 1977 Spill Concentration and Control Act (SCCA), as adopted under rules issued in 1991, requires facilities with certain quantities of chemicals (including petroleum) to submit to NJDEP Discharge Prevention, Containment, and Countermeasures (DPCC) plans as well as Discharge Cleanup and Removal plans. These plans address general information about the

facility as well as any systems in place to contain or mitigate the effects of spills, as well as what the facility would do if a spill occurred.

Post 9/11

In the wake of the September 11 terrorist attacks, the State of New Jersey passed the Domestic Security Preparedness Act (NJDSPA) in October 2001. This act unified security coordination under the newly created NJDSPTF and its Infrastructure Advisory Council (IAC). In 2005, the IAC required that certain chemical sector facilities adopt Best Practices Standards as well as produce site vulnerability assessments (SVAs) examining specific vulnerabilities to terrorist incidents within the facility and take steps to strengthen security. SVAs are highly confidential and are kept on-site. They are available to NJDEP for review and verification, but may not leave the site. Generally, SVAs are characterized as self-help documents.

Finally, the Homeland Security Appropriations Act of 2007 required certain chemical sector facilities to submit to the DHS a Risk Assessment, allowing the Department to assess terrorist incident vulnerabilities and risks at individual facilities. In addition, DHS requires a vulnerability assessment that examines the capability of the facility to react in the event of a terrorist incident.

Locally-Based Chemical Security Planning in New Jersey

Locally-based planning refers to the coordination of planning and distribution of information by actors at local levels of government. However, this categorization does not preclude the coordination or sharing of information with state or regional actors (which is common among local and state stakeholders, but less common between local and regional or interstate stakeholders) in New Jersey.

Local Emergency Planning Committee

Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA) – commonly known as the EPCRA – requires that each state designate a State Emergency Response Commission (SERC) and create a Local Emergency Planning Committee (LEPC) for each municipality and district within the state.[137] LEPC membership is generally approximately 15-20 members and includes, at a minimum, key first responding and municipal officials such as police and fire, elected officials, public health, transportation, and representatives of chemical facilities in the municipality. Each LEPC must create and review on an annual basis a local emergency response plan (ERP).[138] The emergency response plan developed by each LEPC is unique to its locality, but must contain a number of required components:

- Identification of facilities and transportation routes of extremely hazardous substances
- Emergency response procedures, both on and offsite
- Designate a community coordinator and chemical facility coordinator to implement the plan
- Outline emergency notification procedures
- Describe how to determine probable affected areas and populations in the case of an event
- Describe local emergency equipment and facilities, as well as people responsible for these capabilities

- Outline evacuation plans
- Provide a training program for emergency first responders
- Provide methods and schedules for exercising emergency response plans.[139]

Upon the event of an accidental or deliberate release from a chemical facility, the LEPC ERP is put into effect. In order to ensure that local plans are coordinated regionally, the SERC serves to coordinate and review the LEPC ERPs; this function is discussed under State-Cased Chemical Security Planning in New Jersey section of this report.

LEPCs are particularly empowered under New Jersey's system of home rule. The New Jersey Civilian and Disaster Control Act (CDCA) required all municipalities to create "local emergency councils" and emergency plans for all-hazards.[140] Upon passage of EPCRA, this planning function was absorbed by the LEPC under New Jersey Executive Order 161 rather than allow duplication of effort. Executive Order 161 thus greatly empowered LEPCs by making the LEPC the chief emergency management planning body responsible for the compilation of emergency management response plans to chemical events and all other hazards at the local level.[141] LEPCs exist for all 566 municipalities and 21 counties.[142] Since response to chemical events is almost always first carried out by local emergency personnel and first responders, and since the majority of events involve only local response, focused planning at the local level appears both pragmatic and logical.[143]

LEPC membership and plans in New Jersey are diverse and reflect what management, operational, and technical capabilities exist at the local level.[144] Ideally, this diversity of local resources and issues by LEPCs allow for greater familiarity with local hazards and their associated potential responses, and subsequently promotes "tailor-made" local emergency planning.[145] However, the depth of involvement by LEPCs in chemical security planning varies greatly in New Jersey, from detailed and proactive planning bodies who are deeply involved in the security of their municipality to less-involved or simply grant-seeking groups. Engagement in chemical security planning by LEPCs is highly related to the municipality's relative proximity to a chemical facility.[146]

Coordination of emergency response plans between neighboring LEPCs and municipalities is at the discretion of individual localities, which leaves the potential for ill-coordinated local emergency response plans. In turn, lack of coordination could greatly complicate incident management, particularly during large-scale events. For instance, New Jersey was briefly and unexpectedly inundated by thousands of evacuees from New York City during the 9/11 terrorist attacks, which made sending assistance efforts into New York City difficult.[147] While the SERC works to review and ensure as much regional coordination between LEPC plans as possible, cooperative exercises and professional contact are referenced as means to ensure strong working relationships and coordination, the potential exists for lack of coordination between LEPCs.

The level of public access to LEPC planning documents and processes is not clear and varies by municipality. Under EPCRA requirements prior to the 9/11 terrorist attacks, LEPC ERPs were publicly accessible.[148] The EPA website indicates that LEPCs are required by law to make information on chemical hazards available to the public, but it is not clear that this requirement includes ERPs; community members can, however, attend LEPC meetings.[149] State officials we spoke with indicated that while municipality residents are supposed to be able to view their own LEPC emergency response plans, but that in practice the level of access varies by locality due to differing interpretations of confidentiality by individual LEPCs.[150] This

confusion partially stems from a broad clause in the New Jersey Domestic Security Preparedness Act (NJDSPA) that New Jersey's OPRA standards do not apply to chemical facilities.

According to the New Jersey Office of Emergency Management (NJOEM), public information requirements of LEPCs are limited to "discussion about [the] hazards" that a community faces and response to citizen-voiced concerns about level of community preparedness.[151] In this sense, public access and information sharing with communities through LEPCs appears to be of limited descriptive value, and useful only for very broad or general information seeking (such as whether or not a TCPA facility exists in a municipality or the extent, but not content of local emergency planning). The NJDEP and New Jersey Office of the Attorney General (OAG) are currently working to mediate these issues.

Risk Management Plans and Site Vulnerability Assessments

As detailed in the Legal Framework section, reporting requirements for chemical facilities augment local planning functions. Clean Air Act (CAA) 112(r) requires that chemical facilities compile a RMP that includes an offsite consequence analysis (OCA), five-year accident history, and a detailed ERP.[152] The TCPA also requires that chemical facilities compile RMPs and ERPs, albeit under slightly different guidelines.[153] TCPA requires that chemical facilities in New Jersey report standard operating procedures, safety reviews, preventative maintenance, operator training, accident investigation, risk assessment, emergency response, and OCAs if they store or generate EHSs. The reporting requirements of TCPA are approved by the EPA as sufficient to covers its reporting requirements CAA 112(r), meaning that facilities can submit one comprehensive report.[154] Thus, TCPA guidelines are a central reporting and planning requirements for both state and federal right-to-know and risk management programs.

New Jersey revised chemical facility reporting and security requirements in 2005 by enacting chemical sector Best Practices Standards. The Best Practices required, among other things, that 157 facilities in New Jersey complete a site vulnerability assessment (SVAs). In addition, sites that fell under the TCPA (approximately 45 of which were deemed to be in the chemical sector[155]) were required to explore the use of inherently safer technology (IST).[156] SVAs are a highly confidential, in-depth analysis of facility vulnerabilities and consequences of release scenarios – they are essentially self-help guidelines for internal use that allow the chemical facility to better secure itself against both accidental and deliberate releases. The state does not maintain copies of these documents within the NJDEP and process engineers must verify the plan and make comments on-site.[157] Thus, public access to SVAs, reported inventories, and RMPs are extremely limited, which would appear to negate much of the public right-to-know norms. However, despite the strong control over information contained within, SVAs and ERPs allow facilities to compile extensive security planning systems on-site.

Horizontal Coordination at the Local Level

Chemical Facilities and Local Emergency Response Commissions

As earlier noted, LEPCs are charged as the chief local planning body for all-hazards, including chemical facility security and its consequences. Concurrently, facilities are required to compile RMPs and SVAs to ensure that they are adequately prepared for chemical events. Thus, two parallel forms of local chemical security planning are occurring at the same time. In order to eliminate redundancy, chemical facilities are required to participate in LEPC planning.[158] Local exercises and coordination further promote information sharing between facilities and

LEPCs.[159] In this sense, while site-specific ERPs and SVAs are highly confidential, the facility and LEPC are afforded the opportunity to engage one another in planning and collaboration.

Ideally, the LEPC emergency response plan is compiled by the municipality and shared with the chemical facility. In turn, the facility may elect to share its ERP and/or SVA with the LEPC. As information regarding emergency response and operations is shared, both the facility and LEPC can ensure that their plans "mesh" with one another.[160] These plans are then solidified through the cultivation of professional relationships and exercises. While sharing of emergency plans is not required, both the LEPC and facility should have strong vested interest in sharing at least a nominally necessary amount of information. The extent to which facilities and LEPCs engage one another and share information varies in New Jersey by locality, facility, and the relationship between the two.[161] The level of collaboration between facilities and LEPCs is not formally proscribed therefore may vary based on local relationships (which may be bad or limited), as well as emergency response traditions of individual facilities and municipalities (which may range from proactive and collaborative to reactive and separate). Consequently, the extent to which LEPC and facility plans are harmonized likely varies by locality as well.

Utilities in planning for emergencies

In general, utility companies do not undertake the same level of pre-planning as public safety entities, such as the fire department, for example. In the event of a chemical incident, they are prepared to respond to public safety officials and local commanders requesting the shutdown of services in the affected areas. Additionally, utility representatives are asked to assist responders in determining and verifying locations of energy and water sources and other utility resources that could either impede or enhance their work. However, only upon such a request does a utility company become involved with the response effort. Finally, utilities participate in exercises and drills in conjunction with the LEPCs and the SERCs.

The major advance in preparedness as it regards public utilities in New Jersey was the NJDSPTF's Best Practices Standards. The New Jersey Board of Public Utilities (BPU) was charged by the Task Force with revising and distributing the comprehensive utility security Best Practices for the Water, Energy (Electric and Gas), Cable Television, Telecommunications (Landline), and Telecommunications (Wireless) Sectors. BPU-regulated firms were later asked to implement these Best Practices in 2004. Currently, the BPU's main undertaking is inspecting and monitoring compliance with the Tier II and Tier III requirements along with the Best Practices Standards.[162]

Vertical Information Sharing Between Local and State Levels

Local Emergency Planning Commission Planning Documents

LEPC emergency response plans are subject to multiple redundancies in the instance that one or more caches of the official plans become inaccessible or destroyed. LEPC plans are stored both at the county and state level (within the SERC). At any time, if it becomes clear that a locality is unable to access their LEPC plan, a redundant copy is activated.[163] Thus, LEPC plans are regularly shared in a vertical fashion with both counties and states.

Local Emergency Planning Commission Access to New Jersey Emergency Management System

The New Jersey Environmental Management System (NJEMS) is the main database and web-based application used by the NJDEP to maintain and share information regarding chemical facility sites and inventories.[164] The NJEMS database includes information from TCPA

and EPCRA reporting. Upon vetting their need-to-know and credentials, local first responders and LEPC members may gain access to NJEMS.

Access to NJEMS allows the LEPC to have up-to-date and real-time information regarding what chemicals are stored on-site at the facility and in what fashion, as well as total amounts for each chemical. However, the database only lists inventory totals; in the case of a chemical event, the database would not appear to significantly add to situational awareness. While NJEMS has a front-end, publicly-accessible presence, this aspect of NJEMS is limited in scope. State officials stress that interactions at the local level remain the chief source of information sharing and gathering by LEPCs.[165]

State-Based Chemical Security Planning in New Jersey

While localities are tasked with leading operational emergency response planning, the State of New Jersey plays a critical role in policy and operational planning coordination. Much of the chemical security planning efforts at the state-level have less to do with emergency response planning – although planning of this sort does occur – and more to do with the organization of information sharing, coordination of plans, policy formulation, resource allocation and oversight, and exercising. Thus, in a general sense, the State of New Jersey takes a lead role in coordination and policy development and takes a support role in emergency response planning and actual operational response.

All-Hazards Planning

The concept of "all-hazards" planning has been touched upon earlier in this report, but its affect bear mention here. All-hazards planning presents several benefits. Critically, it promotes collaborative forms of emergency planning since responses are likely to involve multiple stakeholders and missions; authority struggles and turf battles may be less likely. This all-hazards planning is best constructed and enacted across multiple actors and stakeholders, thus increasing buy-in to emergency plans and facilitating the horizontal and vertical flow of information. Furthermore, strong professional relationships and partnerships may be more likely to form under collaborative, all-hazards approaches.[166] All-hazards approaches, due to their malleable nature, may also be able to respond more flexibly to local needs and issues. Potential drawbacks can be seen in the potential loss of context and detail inherent to the decrease in focus on event specificity and the difficulty in targeting grant funds for this purpose.

Use of Existing Statewide Networks and Expertise

All-hazards approaches to chemical security in New Jersey build on existing state networks and capabilities by incorporating prevailing expertise into homeland security functions. Interviews with state officials and New Jersey planning documents consistently note the importance of leveraging existing state-based networks for mitigating chemical security risks. To an extent, this can be considered an operational philosophy as it colors most approaches to statewide chemical security planning in New Jersey discussed in this report.[167] For instance, upon receiving administrative purview over chemical security standards under the 2001 DSPA, NJDEP elected to delegate operational response planning to individual localities as they would more fully encompass the situation "on the ground."[168] In this way, existing resources such as the LEPCs, local first responders-facility partnerships, and emergency response plans were cultivated for expertise, efficiency, and local awareness.

Cultivation of Professional Relationships and Networks

Closely tied to concepts of building on existing systems is the importance of professional relationships and networks touched upon in the Putting New Jersey Chemical Security in Context section. State officials indicate that by their very nature, chemical events and disasters are confusing and constantly changing and their mitigation of such hazards absolutely requires the cultivation and maintenance of strong professional relationships and trust.[169] Informal contacts and information sharing regimes are important to mediating uncertain or wide-ranging chemical events.

State agencies interact as equal partners in the planning and response processes. They work together on a daily basis either through the NJOEM Regional Planning Unit or their Task Force responsibilities.[170] In the case of the Chemical Corridor region defined by this report, the NJOEM North Regional Office has dedicated staff who meets daily with local and state counterparts. Furthermore, regular exercises and training serve to formalize information exchange across relationships, including between state and local actors.[171] Thus, stakeholders are aware of their interagency partners and are able to quickly leverage these relationships during emergencies.

Richard Cañas, New Jersey Director of Homeland Security and Preparedness, indicates that a key long-term goal of his office is the continued unification and collaboration of the emergency response community.[172] Generally, the relatively high degree of professionalism and experience of state emergency responders limits personality or ego issues to an extent, although this will remain a problem in any collaborative approach.[173]

New Jersey Domestic Security Preparedness Task Force

The NJDSPTF was created by the 2001 Domestic Security Preparedness Act to oversee general policy oversight, strategic planning, and coordination of all aspects of domestic preparedness for terrorist attacks in New Jersey. Through the Task Force's Infrastructure Advisory Committee (IAC), Best Practices Standards were created for 20 key sectors (including chemical security) across New Jersey. [174] Details are included below as well as in the Legal Framework section of this report. While it is comprised of existing state stakeholders and agencies, the NJDSPTF does not subsume the member agencies. Thus, Task Force members act under their agency's mission, viewed through a security context, rather than under the sole authority of the Task Force.

Best Practices Standards within each sector are the mechanism through which the Task Force sets homeland security and preparedness policy; no unified homeland security planning document exists, though operational response documents exist for the NJOEM.[175] The creation and oversight of the Best Practices Standards is unique because it provides a general architecture for the improvement of state security, while granting actual regulatory power to the operational agencies who best understand each individual sector in question.[176] In this sense, New Jersey pursued a more holistic statewide preparedness program by leveraging a "well-established cadre of [state] operational agencies" who posses relevant policy area resources and expertise to coordinate statewide homeland security planning.[177]

The Domestic Security Preparedness Task Force is comprised of:

- Attorney General
- Superintendent of the State Police
- Adjutant General of Military and Veterans Affairs

- Commissioner of Transportation
- President of the Board of Public Utilities
- Director of the Office of Information Technology
- Secretary of Agriculture
- Commissioner of Environmental Protection
- Commissioner of Health and Senior Services
- Coordinator of the Office of Recovery and Victim Assistant
- Three public members appointed by the Governor with the advice and consent of the Senate. One of the public members must have background or experience in chemical or biological agents used in terrorism.[178]

Statewide Emergency Operations Plan

The Statewide Emergency Operations Plan (SEOP) addresses preparations for, response to, and recovery from all emergency situations where state response assistance is present.[179] As such, the SEOP is the central operations coordination document in New Jersey. The SEOP is required under the 1989 New Jersey Emergency Management Act, and must be updated on a regular basis. Additionally, the Emergency Management Act requires that all municipal and county levels, as well as the State, create emergency operations plans.[180] The SERC is charged coordinating local plans across jurisdictions. However, this still raises a question of duplication and coordination, as it is unclear how familiar all levels are with the plans of other levels.

The SEOP outlines basic mechanisms, organizational structures, resources, and responsibilities and functions of state agencies.[181] The SEOP is comprised of a general plan, outlining basic policies, planning assumptions, organization of emergency management agencies, and broad response actions, as well as 15 functional annexes and several hazard-specific annexes.[182] SEOP takes a "functional" approach, indicating what types of assistance, responses, and authorities would be required under the 15 functional annexes, called NJ Emergency Support Functions (NJESFs). Chemical security response is covered under NJESF 10 – Hazardous Materials. NJESF 10 outlines emergency planning, capacity, training, exercising, and response to fixed or transportation-based incidents involving hazardous materials.[183]

The Plan is created and maintained by the NJOEM, which is currently modifying it to meet new annex requirements under the updated National Response Plan released in 2006.[184] Interviews with New Jersey state officials revealed that the Statewide Emergency Operations Plan is not necessarily a key coordinating document during emergency response as presumably actors are aware of authorities and resources due to regular exercises, professional relationships, and existing operational networks. However, officials argued that the revision and updating of the SEOP serves as a valuable exercise in establishing, formalizing, and validating the networks and relationships that New Jersey emergency response is so dependent upon.[185]

By comparison, it should be noted that no official security operations document exists within the NJOHSP. There is a policy plan, but not an operations one since NJOEM is considered the leader in operations.[186] The Chemical Sector Best Practice Standards are the only official statewide plan for managing chemical security *planning* in New Jersey.

Statewide Emergency Response Commission

EPCRA requires the formulation of an SERC to coordinate planning by LEPCs. Under EPCRA, SERCs are required to:

- Define local planning districts for chemical security
- Appoint LEPCs for each planning district
- Coordinate activities of LEPCs
- Establish procedures for receiving and processing public requests for information collected under EPCRA
- Review LEPC local emergency response plans.[187]

In New Jersey, the bulk of SERC activities are built around coordination and plan review. Particularly, coordination across LEPC plans checks for things like regionally effective evacuation plans between localities, nominal quality levels of plans, and the most efficient use of regional capabilities and assets such as CBRNE teams and homeland security equipment.[188]

The New Jersey SERC is co-chaired by the NJDEP and NJOEM, which is under the authority of New Jersey State Police. Currently, the commission meets at least twice annually to review and coordinate LEPC plans. Members include the NJDEP, NJOEM, Board of Public Utilities (BPU), Department of Health and Senior Services (DHSS), Department of Military and Veteran Affairs (DMVA), Department of Transportation (DOT), Department of Community Affairs (DCA), and the Office of the Attorney General (OAG).[189] The New Jersey SERC also collaborates extensively with the NJOEM on exercising, training, and grants processing.[190]

The limited role of the SERC as a coordinating body may be changing in the near future. State officials we spoke with indicated that the SERC should move toward a greater statewide planning mission and better alignment with the NJDSPTF. Currently, the SERC tends to execute its mission within a relatively small area of domestic security preparedness through stand-alone reporting to the NJOEM and NJDEP.[191] However, since the LEPCs continue to take the lead on local security preparedness and the value of SERC coordination with the Task Force becomes apparent, greater coordination and involvement between the Task Force and the SERC may occur.[192]

While officials indicated that LEPC coordination by the SERC has generally been effective at the municipal level, regional coordination by the SERC and other NJ agencies has been criticized. At least two high-level officials indicated that they felt that information sharing on the regional level, and particularly across state borders, is currently lacking.[193] The State is building regional planning capability to mediate this potential gap in planning.[194]

Vertical Coordination: Private Sector and State

Chemical Sector Best Practice Standards

As mentioned above, the Best Practices Standards at TCPA/DPCC Chemical Sector Facilities are the main statewide policy planning apparatus for the New Jersey security chemical facilities. Since between 85 and 90% of critical infrastructure in the State, including chemical facilities, is privately owned, collaboration with the private sector is a critical to security planning. The Infrastructure Advisory Committee (IAC) was created within the Task Force to coordinate the formulation of Best Practice Standards for the 20 sectors, with input from the private sector. [195] Under the IAC, implementation and administrative authority for the chemical Best Practices Standards was delegated to the NJDEP. Private sector chairs and leaders from the

chemical industry of New Jersey acted as practitioners and contacts in the planning process, along with the American Chemistry Council and American Petroleum Institute.[196] Their participation likely increased private sector "buy-in."

The NJDSPTF released voluntary Best Practices Standards in 2003. In 2005, these standards became mandatory and enforceable for all chemical facilities in New Jersey. Additionally, the standards supplemented TCPA reporting by requiring SVAs and offsite consequence analyses in 157 facilities whose chemical levels were above TCPA and/or DPCC threshold levels. Also, the exploration of inherently safer technology (IST) was required in 43 chemical facilities.[197] By the end of 2006, 157 facilities were fully compliant. To date, the four exceptions that are still outstanding are all Tier III facilities that have no offsite consequences[198].

The Best Practices Standards security function is a 100% "add on" to the NJDEP mission. However, officials note that the additional functional responsibility is not overburdening due to the agency's strong regulatory history and involvement in the chemical sector.[199] As one official stated – "we took advantage of resources and plugged the security function directly in."[200] For instance, process engineers who verify TCPA standards adapted inspections checklists to cover monitoring of Best Practices and SVA adoption.[201] Unlike federal level regulations, NJ categorized its chemical facilities into 3 tiers according to the potential danger they pose to the community. Priority was given to bringing higher-risk facilities in line with the Standards before the lower-risk facilities.

During October 2005, the 94 TCPA covered chemical facilities were inspected by NJDEP officials, accompanied by workers and union representatives who were encouraged to point out hazards. New Jersey was the first state in the nation to use facility workers as critical planners.[202] However, employees are generally underused during chemical security planning processes to the detriment of security endeavors – workers are truly at the "ground level" and can contribute immeasurable amounts of information toward all-hazards planning.

It should be noted that the extra security responsibility required of state agencies and actors under the New Jersey model may be more difficult to manage for some agencies than others due to limited resources and/or lack of institutional knowledge or history in its assigned homeland security sector. It should also be noted that community groups have heavily criticized certain aspects of the Best Practice Standards, including the high level of private sector involvement, perceived lack of representation of unions, environmental, and public health groups in planning, and confusion over their complexity and potential duplication.[203]

Private Sector Advisory Council

In addition to private sector guidance offered by the IAC, Director Cañas of the Office of Homeland Security and Preparedness has created a smaller workable body of private sector advisors. This group of approximately eight CEO-level experts is set to provide white-paper type of advice on private industry security matters.[204] The group does not represent each homeland security sector individually and we were not able to verify whether chemical security interests are specifically represented. This new group is still being fleshed out, but appears to be a useful tool for engaging private sector stakeholders in homeland security planning and coordination, as well as ensuring informal information sharing across sectors.

Exercising

Officials regularly noted the centrality of repeated exercising as a means to formalize relationships and information sharing protocols. Taken as a whole, New Jersey bases a great

deal of its chemical security planning mechanism on repeated, formal exercising coordinated by the NJOEM. One official noted that this type of coordination has existed for 30-40 years and is very well established.[205]

Trainings provide an excellent foundation for achieving several key objectives in New Jersey. First, they formalize relationships between first responders, state and local officials, chemical facilities, and planners by familiarizing them with who will "show up" during an incident.[206] In essence, they allow the State to create an "architecture" of planning that can be modified based on individual chemical events. Second, they allow the State to determine where, if at all, chemical security response plans break down and provide data on how to remedy such breakdowns. Third, exercises facilitate for the quick distribution of assets and resources during an actual event, as responders become familiar with existing resources and how to obtain them. Finally, exercises promote relationship building and trust, both of which mitigate uncertainty among responders during actual incidents.[207] Exercises essentially guarantee the continual maintenance and updating of statewide and local emergency response plans and infrastructure.

Recently, the state has focused much of its exercising on table-top and full-scale regional exercises in order to enhance regional planning capabilities. These exercises have included partners at the Port Authority, multiple New Jersey counties, New York City, and New York State.[208]

Training for Chemical and Petroleum Sector Workers

The NJDSPTF has focused on building worker-training programs for chemical and petroleum sector workers.[209] Their aim is to ensure that counterterrorism and infrastructure protection information is shared with them, both for their safety and to build information sharing links between workers and state planning bodies. The key initiative in this regard has been a pilot training program called "Chemical Plant Security Awareness and Preparedness Program for the New Jersey Chemical and Petroleum Sectors." It is a joint effort by the New Jersey Department of Labor and Workforce Development, NJDEP, AFL/CIO, the New Jersey Institute of Technology, and chemical industry representatives. The New Jersey Institute of Technology produces the materials and trains AFL/CIO instructors, who in turn use "train-the-trainer" instruction to educate facility representatives on chemical security preparedness measures. Facility representatives then can carry out training at local facilities.[210] The result is ideally greater worker awareness of site vulnerabilities, resulting in increased worker and plant safety. Importantly, while the potential gains of such a program are very high, the utility of it is largely based on the ability of the trainer to effectively train fellow employees within the facility, which is dependent both by facility resources and trainer skill.

Buffer Zone Grants

Chemical Sector Best Practice Standards focus on security within the perimeter of chemical facilities. However, important and real security vulnerabilities exist in the areas around chemical facilities, where law enforcement agencies have purview – so called "buffer zones." For example, shipments of chemicals and their precursors are not under the protection of Best Practice Standards until they enter the facility perimeter. Buffer zone protection is therefore a vital component of chemical security planning in New Jersey.[211]

The NJDSPTF is currently working with the NJOHSP Office of Counter-Terrorism, New Jersey State Police, and DHS to increase buffer zone security in New Jersey through enhanced surveillance and target hardening.[212] Generally, this operation is carried out through the creation of Buffer Zone Protection Plans (BZPPs); approximately 55 BZPPs have been created

for chemical and petroleum facilities since federal fiscal year 2005. Additionally, DHS has led two Buffer Zone Protection Plan tabletop exercises at two high-consequence New Jersey chemical facilities.[213]

CHEMTREC

As discussed in the Stakeholder section of this report, the Chemical Sector of Information Sharing and Analysis Center (ISAC) was developed by the American Chemistry Council (ACC) in 2002. The ISAC offers useful nationwide intelligence reports and analysis to over 600 customers through its CHEMTREC program.[214] Importantly, ISAC/CHEMTREC services are not limited to ACC members and can be accessed by any chemical security planning or response official. Through CHEMTREC, New Jersey planners are able to access information about events and trends nationwide. CHEMTREC serves as a simple, yet effective, information source New Jersey planners can use to compare New Jersey and national chemical security trends. State planning officials indicated that the CHEMTREC system is useful for this narrow range of use, but is sporadically used.[215]

New Jersey Environmental Management System

The New Jersey Environmental Management System (NJEMS) is the central database tool used by the NJDEP to maintain and share information regarding chemical facility sites and inventories. NJEMS is a web-based application that includes information from TCPA and EPCRA inventory reporting. It is open to chemical security and environmental protection stakeholders who demonstrate adequate need-to-know and credentials. This database also includes GIS capabilities. Through NJEMS, users are able to access up-to-date information regarding what chemicals are stored on-site at a facility, total amounts of chemicals and precursors stored on-site, etc. Generally, NJEMS serves a "site awareness" function that is useful for planning responses to chemical facilities.[216] Importantly, no site-specific information on vulnerabilities and facility security measures is available on NJEMS.[217] Citizens may access a public, front-end version of NJEMS, but the amount of information through this interface is highly limited.

Regional/Interstate Chemical Security Planning in New Jersey

Increasingly, experts cite the necessity of regional coordination and planning for homeland security. This need is particularly relevant in New Jersey as a chemical release would almost invariably require response from other states. Regional planning is most successful when coordination is carried out across multiple stakeholders through structured forums and codified decision-making protocols, and if consistent political and leadership support are applied, flexibility is introduced, and a strong history of collaborative culture exists.[218]

This report defines regional/inter-state planning approaches as those that include multi-jurisdictional (municipal, county, or state) and/or interstate coordination components. In actuality, local and state-based approaches to chemical security planning in New Jersey include some degree of regional coordination. For example, LEPCs use inter-municipal coordination and state planning exercises.[219] The following section, however, focuses on approaches to chemical security planning that are expressly or fundamentally regional in nature.

Local Emergency Planning Committee Regional Planning

LEPCs are not required to institute regional approaches to local emergency planning. The SERC reviews LEPC plans to ensure a nominal level of coordination, but only between

localities within the State. While LEPCs that reside in localities that border New York, Delaware, and Pennsylvania may coordinate their plans with neighboring states, this effort is entirely voluntary and is not consistent.[220] Furthermore, LEPC coordination with non-state actors such as the Coast Guard or Port Authority is not required. While exercises can mediate a good deal of ambiguity in planning between local actors across state borders, as well as with non-state actors, the inconsistency in local emergency response planning across regional bodies remains a significant gap in chemical security planning in New Jersey.[221]

County Homeland Security and Chemical Security Empowerment

The NJDSPTF has pressed an increasing regional approach to homeland security initiatives through county empowerment, including chemical security planning.[222] Historically, New Jersey has not had powerful county-based government; new initiatives have begun to empower these governmental units.[223]

In 2003, the Task Force required each county to create County Multi-Disciplinary Working Groups, which are charged with developing funding strategies based on all-hazards analyses within the county.[224] County Working Groups are typically comprised of the county office of emergency management, county administrator or freeholder, county fiscal officer, county critical infrastructure coordinator, county police and prosecutor, county medical response, county fire department, and county medical examiner or health official.[225] NJOHSP works directly with County Working Groups to review and approve each county's spending plan. As a result, counties have spent funding largely on equipment-pooling and shared capacity endeavors, such as county CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) response teams and vehicles. This regionalization of CBRNE teams is discussed in the Stakeholder section.

In order to more effectively take regional effects into account, the Task Force has used federal homeland security funds to fund county critical infrastructure coordinator positions in each of the 21 New Jersey counties.[226] These coordinators are charged with assessing vulnerabilities and criticality within counties, conducting threat and risk management assessments, target hardening, and maintaining databases of requisite critical infrastructure in the county. The coordinator also serves on the County Working Group, which develops county funding strategies, and interacts with state and local chemical security and homeland security officials.[227]

Regional Operations Intelligence Center

The Regional Operations Intelligence Center (ROIC, pronounced "ROCK") was built and is operated by NJOEM. The ROIC is an all-crime, all-hazards intelligence analysis center which houses NJOEM and NJOHSP personnel, as well as personnel from non-state agencies such as the Port Authority of New York and New Jersey, DHS, FBI, and soon to include the New York City Police Department.[228] The ROIC maintains a 24-hour, 7-day a week intelligence analysis and sharing capacity that allows participating agencies to gather, analyze, share, and protect information in real-time. Furthermore, by locating analysts from multiple agencies in the same place, the ROIC builds strong collaborative relationships and information sharing networks, formalizing regional information and intelligence sharing networks. The ROIC also contains an emergency management response arm called the Emergency Operations Center (EOC) that can be activated to support incident or unified command during large chemical or homeland security events.[229]

The ROIC has access to HSIN, HSIN-Secret, and FBI LEO, EPIC, Accurint, and E-Team databases and bulletin information.[230] Upon receiving real-time bulletins, the ROIC "turns around" information, with redactions if necessary, to 17 critical homeland security sectors (as defined by DHS standards) through a large electronic mailing list. In addition to its ability to distribute what critical, real-time bulletins it receives, the ROIC distributes self-generated "bulletins of interest," after having cleared these bulletins with FBI Joint Terrorism Task Force (JTTF) partners.[231]

Terrorism Intelligence Fusion Center and Sensitive Compartmented Information Facility

In 2005, under the guidance of the NJOHSP Office of Counter-Terrorism, New Jersey created a Terrorism Intelligence Fusion Center (TIFC) in Hamilton, New Jersey. The TIFC combines local, state, regional, federal, and private sector stakeholders to detect, prevent, apprehend, and respond to terrorist activity.[232] The State has not detailed the development of the TIFC or how it will integrate with existing collaborative approaches such as the ROIC and regional FBI JTTF and thus its utility remains unclear.

Additionally, New Jersey has finalized plans for a Sensitive Compartmented Information Facility (SCIF), which will hold secret/top secret security clearance features and will allow the NJOHSP Office of Counter-Terrorism to analyze more restricted intelligence.[233] Like the TIFC, it is not clear how the mission of the SCIF will integrate with existing regional collaborative approaches.

Analyst-to-Analyst Information Sharing Between ROIC and FBI Analysts

ROIC intelligence analysts meet regularly with partners at FBI Field Intelligence Groups (FIGs) in Philadelphia, Newark, and New York City. [234] FBI FIGs specialize in analysis, fieldwork, linguistics, and surveillance, all of which are extremely useful capabilities for ROIC staff.[235] Conversely, ROIC staff can provide intelligence sharing and locally based analysis, including information on chemical plant security plans within the state that is extremely useful to FIG analysts. The groups offer unique expertise that is mutually beneficial. Meetings between ROIC analysts and FIG analysts are collaborative in nature and are essentially "comparing of notes" sessions. Such informal, but regular, meetings are immeasurably valuable and represent a potential "best practice" for regional chemical security initiatives.

Northeast States Emergency Consortium (NESEC)

New Jersey emergency management officials participate in the Northeast States Emergency Consortium (NESEC). It is a unique not-for-profit organization supported and funded by DHS and dedicated to the development, promotion, and coordination of "all-hazards" emergency planning activities in the Northeast states. NESEC is governed by the Directors of state-based offices of emergency management in the six New England states and New York and New Jersey.[236] The NESEC Directors meet periodically to discuss and coordinate emergency management, public awareness and education, share intelligence. NESEC has an information sharing presence on HSIN.[237]

NYC Office of Emergency Management Hotline

The New Jersey Office of Emergency Management has instituted a "hotline" direct phone line to the New York City Office of Emergency Management. This line is regularly used

to orchestrate planning and response and is a quick and effective means to share real-time information, particularly when used in coordinating interstate evacuation plans. [238]

Port Authority of New York and New Jersey

The Port Authority of New York and New Jersey is unique in that it is chartered as a bi-state agency. This unique position could permit it to take a "bridging" role between New Jersey and New York in order to facilitate chemical security planning across both regions. Unfortunately, the decentralized planning processes inherent in New Jersey home rule means that plans and stakeholders do not align well with the more regimented approach found in New York State, and particularly New York City. As such, interstate planning is difficult and is often not as coordinated as it should be. This difference in structure is outlined in the Putting New Jersey Chemical Security in Context section of this report. New Jersey officials disagreed as to the adequacy of current levels of interstate coordination. While events such as the Gateway Exercise at the Port Authority have brought various stakeholders together, one NJDEP official noted that information sharing "is not routine."[239]

Response

Arguably the most critical phase of the disaster cycle is the response stage, where resources and energies are pulled together within moments following a report of a chemical incident. At this stage, the best-laid plans of committees and agencies are put to the ultimate test.

While there is never enough preparation for unexpected chemical incidents, New Jersey has considerable experience in ably managing chemical disasters. For example, the New Jersey Department of Environmental Protection (NJDEP) Bureau of Emergency Response (BER) has participated in the management of the Gordon Terminal fire, which took place on Thanksgiving 1987; the Exxon pipeline spill, January 1989, the Edison pipeline explosion, February 1994; the Lodi chemical explosion, April 1995; and the Anitra motor tanker oil spill, May 1996, among other incidents.

The amount of planning undertaken and the pre-established working and personal relationships between the chemical facility, the first responders, and the local community factor in heavily with the management of chemical disasters.

Mechanism for Reporting an Incident

Under the State of New Jersey Domestic Security Preparedness Task Force's Best Practices Standards, within 15 minutes of discovery of an incident – either an accidental release or a security breach – chemical facilities are required to notify the State Police or a local law enforcement agency. Within 24 hours, the NJDEP must also be informed.[240]

There are also various hotlines in place that can be contacted, by both chemical facility and the general public, in order to report a chemical incident. Aside from the 911 numbers, the public can also call:

NJ Office of Emergency Management: 866-4-SAFE-NJ/ 866-472-3345

NJDEP: 877-WARN-DEP/877-927-5337

State Police: 609-882-2000.

Upon receipt of the call, trained telephone operators process the information and turn it over immediately to the NJDEP, the State Police, or the Department of Transportation (DOT), all of whom are currently housed in the same location five miles from Trenton, New Jersey, thereby facilitating the flow of information among them. Representatives from these agencies are dispatched to the scene. In addition, information processed from the call is also shared with the Regional Operations Intelligence Center (ROIC) of the Department of Homeland Security, for its possible intelligence value. The NJDEP reports a volume of 100,000 calls received annually on its hotline alone.

Typically, in a chemical emergency, an on-scene coordinator from the NJDEP BER is dispatched upon receipt of the report. He or she arrives at the site and evaluates whether the situation poses a threat to the environment and to public health. This assessment affects potential elevation of the response, to the state and federal levels, as needed further down the line.

At the same time, other local first responders also appear on the scene. This team of first responders consists of local fire department, local law enforcement, emergency medical services, and the county CBRNE team.

Local First Responders Take Lead in Incident Response

The strong home rule tradition in New Jersey dictates that localities have operational authority during response to a chemical incident. Typically, incident commander during local response is usually the police or fire chief with jurisdiction where the incident occurred. As stated in the National Response Plan (NRP), incidents are handled at the lowest jurisdictional level. Upon learning of a chemical incident, the local police or fire chief in the municipality of the incident initiates on-site incident command immediately.[241] Municipal-level offices of emergency management exist in every locality in New Jersey and these bodies respond to each incident as well.[242]

Additionally, local responders – and specifically the incident commander – control all resources on-site. While state representatives such as the NJDEP and State Police are typically represented on scene, they do not have operational authority. For example, the NJOEM deploys its regional personnel to chemical incidents, but only to serve as a liaison to local and county first responders.[243] The majority of responses to chemical releases in New Jersey are not severe, and as such the majority of response scenarios remain under the purview of local responders.[244]

Information Available to First Responders

The chemical facility and the community of first responders are considered the first line of defense. Generally, however, first responders do not have detailed information when they are dispatched to a chemical incident site. In this sense, information gathering is a critical aspect of incident response. An inability to obtain or effectively analyze critical information is potentially extremely dangerous. Thus, ensuring that information is available to first responders on-site is essential.[245]

The chemical facility has a responsibility to notify authorities and to seek to contain and manage the situation. The first responders, relying on experience gained from previous exercises, depend on the assistance and information shared by the chemical facility, which have an obligation to share their own emergency response plans with them. First responders, however, do not have access to the site vulnerability assessments and therefore rely on the cooperation of the chemical facility concerned. Thus, the assistance given by the chemical facility to the first responders is important to response management.[246]

It must also be mentioned that exercises conducted between the chemical facility and local responders help build trust and establish a working relationship that facilitates cooperation during the highly stressful and chaotic event of a chemical incident. Through regular exercises, the chemical facility representatives get to know the individuals and agencies that will come to their aid during an emergency. The first responders also become acquainted with the other entities that will be present at the scene.

To provide guidance and coordination to the overall response effort, the LEPCs in each New Jersey town and municipality are required to prepared written emergency operations plans that outline roles and responsibilities of different stakeholders, including the chemical facilities in the area.

First responders can access information about which chemicals are involved and the quantities stored in the facility, through the NJDEP's NJEMS database. The NJDEP provides additional situational and on-site awareness to advise first responders of security considerations that might not be immediately apparent. Situational awareness can be gathered from a variety of sources, such as GIS data mapping, weather information, remote sensing,

ground surveys, among others. When communicated to emergency managers, this kind of information can influence incident management decision-making.[247]

Even with training and exercises, first responders might need guidance on how to handle dangerous and hazardous chemicals when an incident actually breaks out. This type of information is supplied by the New Jersey Department of Health and Senior Services (NJDHSS) through its Office of Emergency Medical Services (OEMS). Emergency medical services providers receive training and guidance in the proper handling and management of choking agents, blister agents, nerve agents, and cyanide, among other hazardous substances, as well as in quick recognition of the material.[248]

Another source of information is the ACC's CHEMTREC database. CHEMTREC coordinates and communicates critical information needed by emergency responders in a hazardous material-related incident. Telephone operators with a background in dealing with hazardous chemicals are available around-the-clock and use an extensive library and database to source information that might be crucial on the field. Additionally, the NJDEP's analysts for security preparedness turn to CHEMTREC for information on how other states deal with similar chemical incidents.[249]

Utility Companies During Response

Utility companies, especially gas and electricity, while part of the State Emergency Planning Commission (SERC), have a less active role in the event of a chemical incident. According to a source, utilities in general do not conduct pre-planning and rely on the request of public safety officials for their services to be shut off when these pose a threat to first responders. When a utility company receives a call from the police or fire chief in command of the emergency response, it immediately contacts the district office of the company to shut off services. Utility representatives are often used as resources during the on-site emergency response. Copies of local and state emergency operations plans are made available to utility companies. They also participate in emergency exercises in the state and the region. Response has been set to a uniform, incident-generic mechanism that does not specify an approach to a chemical incident. However, there are currently no firm guidelines on how utilities – ranging from the private, investor-owned firms, to the public companies, to the independent providers – should respond to a chemical incident. Commonly, utilities have a clearly defined role in restoration efforts after the incidents.

Protocols if Local Responders Are Overwhelmed

The state or county typically does not become directly involved in emergency response operations until the locality requests material or personnel support, or relinquishes its authority.[250] In these cases, chemical incidents are generally more severe, leading to a drain on local resources. Instances where local first responders are forced to work budgetary burdensome amounts of overtime, infrastructure and/or equipment become damaged or inoperable, or health systems and hospitals are overwhelmed, are all scenarios that would likely lead to requests for outside assistance or mutual aid.[251]

When resources become exhausted in such a fashion, the incident commander reaches out to neighboring communities for aid, equipment support, and/or personnel support, and in some cases, expertise. Often, resource requests to adjacent communities are made through mutual aid agreements.[252] If these resources are not sufficient, the locality typically then will reach out to county emergency management officials. If necessary, the county level Office of

Emergency Management will activate to coordinate resources to the local level responders and deploy any county-based specialized teams (such as CBRNE).[253] If necessary, the county Office of Emergency Management will reach out to the state for resources.[254] If resource requests are made to the state, NJOEM activates in order to funnel resource support and/or specialized teams to the incident commander.[255] If necessary due to an expanding area of danger or large-scale mobilizations (ex: evacuations), NJOEM may activate the Emergency Operations Center (EOC), to coordinate offsite responses.[256] Importantly, the locality remains in charge of incident response, regardless of whether or not if they request resources from the county or state.[257] For instance, during response to an incident at a Valero refinery, a facility covered by the Toxic Catastrophe Prevention Act, local incident commanders reached out to the county for air monitoring and made extensive use of this resource.[258] Therefore, the incident commander maintains operational authority over all resources – including those provided by other municipalities, counties, or the state until he or she relinquishes command.

Unified Command

Unified command, as defined by the NRP, is an application of the incident command system used in situations where more than one agency with incident jurisdiction exists, or when incidents cross political jurisdictions. Unified command includes emergency response stakeholders and is contained at the Incident Command Post (ICP).[259] Unified command is common during emergency response. Due to the fact that response, to large-scale chemical events, is generally complex and involves multiple stakeholders, a well-functioning unified command is critical to response in New Jersey.[260]

Once local command over the incident has been relinquished, unified command is set up among local, county, state, and federal responders.[261] Incident command moves authority from a locally based command to a single command structure encompassing multiple stakeholders and responders.[262] Depending on the type, size, and nature of the chemical incident, the group of relevant responders may differ significantly, and thus, the unified command structure will also vary.[263] Unified command lasts as long as needed, potentially for months.[264]

While unified command is characterized by collaboration and cooperation, leadership and coordination are necessary. As such, the New Jersey Statewide Emergency Operations Plan indicates that NJOEM is the lead *coordinating* body for all chemical incident responses and thus coordinates all actions by the unified command. However, individual agencies or stakeholders take lead roles in various *operational* aspects during emergency response, while remaining subservient to NJOEM. For instance, NJDEP is charged as the lead operational agency for all emergency response actions by the unified command for any environmentally-oriented incident (including chemical releases). NJDEP is thus a support agency to NJOEM.[265] Other agencies have similar missions under unified command, essentially acting as operational support to the coordinating function of NJOEM.

Elevation to Federal Response

The National Response Plan states that generally, incidents should be handled at the lowest jurisdictional level possible. Following an incident, the municipality often has to deal with such issues as casualties, injuries, evacuations, loss of homes and property; damage to public facilities and infrastructure; utility outages, debris, overwhelmed medical facilities, and emergency responders working overtime for days or even weeks. At this point, resources at the local, county, and state levels can potentially be exhausted.

The NJOEM conducts a preliminary damage assessment (PDA) to determine the extent of the damage to individuals, infrastructure, and public facilities. Documentation is necessary to request federal disaster assistance. A compilation of PDAs from impacted communities is submitted through the Office of the Governor to FEMA in what is known as the Request for Federal Disaster Declarations.[266]

In the days following the disaster, state and county officials in New Jersey are advised to anticipate and field questions from the media on recovery and restoration issues. Additionally, senators and representatives, and other elected officials would typically want to survey the affected site. Their involvement might also become useful for advocating the request for a declaration of a federal disaster.

The President of the United States may declare that a major disaster or emergency does indeed exist, and this opens up an array of federal programs designed to assist in the recovery efforts. Federal disaster area determinations are not automatic, and the process may carry on for as long as 30 days, although with some incidents such as Hurricane Floyd, this declaration came within hours after the event.

If the Presidential Disaster Declaration is received, FEMA creates a Disaster Field Office jointly with the NJOEM. If the emergency becomes classified as an Incident of National Significance, under the criteria described in an earlier section of this report, the Department of Homeland Security becomes the lead coordinating agency. However, all activities remain in conjunction with the state and local authorities of the affected area.

Personal Relationships as Key to Effective Response

Throughout the course of this research, officials from various agencies involved in planning and response, in the event of a chemical emergency, consistently underscored the importance of building mutual trust and personal relationships. As a source from the NJDEP stated, "When an incident happens at 3am, you don't want to meet your counterpart for the first time."[267]

New Jersey has steadily fostered this community of trust and cooperation through exercises involving chemical facilities and first responders at the local level. These exercises are also replicated at the state and regional levels, expanding the number of agencies and personalities, involved. The strong tradition of mutual aid and cooperation in the State also help. Exercises and their use in planning and preparedness are discussed in the State-Based Chemical Security Planning in the Preparedness and Planning section of this report.

Resources contacted for this report frequently stated that personal relationships have been the key to a smooth, well integrated response to an emergency. Issues of turf and territory gradually fade through continued and constant interaction among agencies, some of which – such as the NJDEP, the State Police, and the DOT, among others – deal with each other on a daily basis, and have regularly scheduled meetings.

Individuals we spoke with, however, also pointed out that the effort to build relationships should be expanded to include other important actors in the region. While New Jersey has well-developed linkages within the State, a more regional approach is necessary. Discussion and interaction at the interstate level remain limited, thus affecting the prospects of coordination.

Finally, emergency management has become a profession and is better understood in the public sector. In New Jersey, emergency management personnel are engaged in this work

on a full-time basis, thereby creating a strong sense of consistency and familiarity within the community of responders.[268]

Preparedness and Training for First Responders

Leading the team of first responders on the scene is the NJDEP Bureau of Emergency Response (BER). BER officers are required to have a college education and one year of training in handling hazardous materials and managing response to related incidents before they can be employed by the agency.

The first responders typically come from the ranks of the fire department, law enforcement agencies, emergency medical units, and other related organizations. Due to the demands of their line of work, New Jersey directed training for the first responder community through NJlearn.com, a "virtual academy" whose goal was to provide the most up-to-date disaster response training to supplement the practical exercises each responder already receives within his or her own agency. Mandated courses include: Incident Command Systems, HAZMAT awareness, and CBRNE awareness. Moreover, first responders can learn about Psychological First Aid and Business Continuity, as well as other federal homeland security courses, through the portal.

In addition to the highly trained BER and the roster of first responders, the local community brings in its own pool of trained and qualified volunteers. New Jersey has surpassed Texas as the state with the largest Community Emergency Response Team (CERT) program in the United States. It is managed by the State Police. Furthermore, New Jersey has 175 Citizen Corps Councils, which offer several activities for citizens to become involved in bolstering homeland security preparedness. New Jersey's CERT volunteers are members of the public who undergo an eight-week, 20-hour training course on such subjects as disaster preparedness, fire suppression, first aid and triage, search and rescue, disaster psychology, terrorism preparedness, and organizational management. A volunteer is attached to a specific local, county, or state CERT, and is considered a vital support to first responders and other citizens in the outbreak of a chemical incident. Finally, CERT training is also now being aggressively targeted towards New Jersey state employees.

NJDHSS also maintains the Medical Reserve Corps (MRC) deployed in each county in the State. The MRC unit is a group of healthcare professionals and community health volunteers that are willing to provide volunteer assistance and support to existing resources during a public health emergency. Furthermore, the MRC unit participates in exercises and drills at the lowest jurisdictional level; hence these responders have a familiarity with the chain of command and incident management.[269]

Cleanup and Recovery

The restoration of normalcy, following a chemical incident, is an equally arduous and formidable task for the community, hence the inclusion of recovery as a stage in the disaster cycle. The National Response Plan defines recovery as "the development, coordination, and execution of service- and site-restoration plans and the reconstitution of government operations and services through individual, private sector, nongovernmental, and public assistance programs."[270]

At this stage, as in others, the local, municipal, and state authorities have primarily responsibilities in the restoration and rehabilitation efforts. From the opening of highways and roads, and infrastructure, such as schools, to the restoration of clean, potable water, to securing of housing and shelter for the displaced, all public agencies maintain an active role in restoration.

In some cases, when authorities and resources are overwhelmed and the President makes a disaster declaration, the federal government becomes involved in this stage as well. A variety of federal disaster assistance is available to those affected by the disaster.[271] The first level is individual assistance, which extends to individuals, families, and businesses. Some examples of this are temporary housing assistance, home repair assistance, and Small Business Administration disaster loans.

The second level is public assistance, which goes to mostly public entities, and certain private non-profits, for emergency services and for the repair or replacement of damaged public facilities. FEMA funds the repair, restoration, reconstruction, or replacement of public facilities destroyed in the disaster. This includes educational, utility, emergency, and medical facilities, among others that provide essential services of a governmental nature to the public.

The third level is Hazard Mitigation Assistance, which funds measures that will reduce future losses to both public and private property. All counties in the affected state can apply for assistance under the Hazard Mitigation Grant Program.[272]

The federal government remains involved in the recovery and restoration process by assessing damages and potentially recovering response costs from the parties responsible, such as the chemical facility. When required, the federal government can also enforce the liability and penalty provisions of applicable legislation, such as the Clean Water Act, for example.[273]

Following a chemical incident, the NJDEP would monitor possible continuing effects of the incident on the environment and public safety. The Department of Health and Senior Services (DHSS) also continues to maintain a register of individuals contaminated by or exposed to a particular agent during the incident, and to monitor the health and safety of first responders.

Members of the private sector are also involved in restoration. Utility companies are asked to restore services and rehabilitate installations that may have been affected during the incident. Volunteer organizations and not-for-profits also manage relief operations and resource transfer to affected communities.

Chemical Security Preparedness and Response Gaps

Based on our analysis of existing literature and federal, state, and local regulations, as well as interviews conducted with various officials in New Jersey and surrounding region, we have identified a number of gaps in the current processes and systems for preparedness and response to chemical emergencies in New Jersey.

Authorization Triggers

Given New Jersey's strong home rule tradition, response authority primarily remains with the local and municipal governments, who often rely on informal and formal agreements with other municipalities and counties to provide assistance. Assistance from the State is provided at the request of the incident commander. First responders at an incident may elect to form a unified command. This system may break down as an increasing number of government agencies and offices are formed to respond to incidents.[274] Additionally, the fashion in which incident commanders request aid or form unified commands is not standardized and may differ based on the personality or management style of the incident commander. This variation leads to potentially confusing lines of authority on-site.

The State Emergency Response Commission (SERC), as well as New Jersey's homeland security mission, are moving toward a more regional approach. Pooling of resources from multiple municipalities in the event of an incident is increasing. This approach seems better suited to addressing issues that have ramifications beyond where the facility is located. Additionally, regional approaches better prepare New Jersey for communicating efficiently with the federal government.

Informal Communications Systems

New Jersey officials noted the importance of personal relationships in communicating between agencies that might respond to a chemical attack: "(At the) end of the day it boils down to relationships and people and trust."[275] These relationships were cited in response to questions concerning the structure of information sharing and coordination between local and state officials.

The frequent citation of personal relationships as a key element in chemical security is potentially troubling because of the degree to which officials seem to feel that these relationships suffice in place of a more structured protocol. Personal relationships were not only cited as helping facilitate coordination between local and state officials, but also when discussing coordination and information sharing at the inter-state level. Officials highlighted the importance of personal relationships, despite the fact that they acknowledge the inevitability of turf battles.[276]

In response to a question about emergency response plans, one New Jersey official said: "It is more of a collaborative approach, rather than having one personality dictate over the other. We work together as equals. We know each other and how to work with each other."[277] However, the contention that turf conflicts never occur and that personal relationships do not breakdown seems over generalized. If terrorists were to attack a chemical facility, there would be little room for ambiguity in any coordinated response. And in terms of inter-state coordination, statements from at least one regional security official indicated that regional officials do not "know each other" and therefore do not have the personal relationships that some NJ officials cite as helpful in coordinating emergency response.[278]

After learning that personal relationships were cited as a tool of coordination more often than concrete protocols, further investigation was conducted regarding information sharing mechanisms in place. The Local Emergency Planning Commissions (LEPCs) are supposed to have access to information about the facilities in their areas and what chemicals those facilities contain, as set out in Emergency Planning and Community Right-to-Know Act (EPCRA). While there is a system that allows LEPCs to access some information through NJDEP, they do not have access to all of it.[279] NJDEP said that more specific information about what materials were on-site and how to handle them were only available through the Department of Health and Senior Services (NJDHHS).[280] Thus, if an LEPC sought information about a facility in its locale, it would have to consult two different databases in two different departments within the State. In addition, the SVA plans may only be viewed at the facilities. This mechanism does not make it easy for first responders to gain access the data they need to prepare for a possible chemical disaster.

When the NJDEP was asked what information it provides to first responders (in light of the fact that SVAs are kept on-site and that the NJDHHS provides other details to first responders), it responded that "We give exactly what we think is happening and what other chemicals are on-site. Just a kind of situational awareness so we can tell them something that might not be apparent to them."[281] This is another example where it seems a formal structure is lacking between the NJDEP and the first responders. Officials from the NJDEP went on to say that certain information first responders would seek during an incident is only available "secured in our offices in paper form and in a few stand-alone databases."[282] This further indicated that first responders are lacking information that would help them better prepare for chemical incidents.

The utility sector could play a large role in helping mitigate the effects of a chemical disaster if it had protocol instructing it what to do in the case of Plant X releasing chemical Y. Instead, the utility sector has to wait for instructions after the incident has occurred. Thus, the only action that the utility sector takes is post-incident.

When asked if officials at the NJDEP had a developed a mechanism for sharing information with other states, officials indicated that information sharing exists but that it is not routine.[283] New Jersey officials noted that inter-state exercises were one way the information was shared between state officials in NJ and first responders in other states, but that these exercises were not necessarily a routine mechanism.[284]

Need For Formalized Agreements of Cooperation

While New Jersey has a strong tradition of mutual aid and collaboration, more formalized agreements are needed between entities involved in the response effort. Most of the expectations surrounding emergency response have been built around long-standing, yet informal, agreements. At some point, however, formal written instruments are useful in outlining priorities and capabilities, as well as laying down deliverables in black-and-white. Particularly, such necessity can be seen in the need to set out formal responsibilities for the use and management of pooled or regional resources such as CBRNE teams and equipment. In addition, grants are allocated to agencies according to the role they play in a particular aspect of emergency response. Therefore, written agreements such as memorandum of understanding (MOUs) – representing a shift from an ad-hoc outlook towards a more formalized system – can be useful in the case of New Jersey.

Information Distribution Problems

Analyzing the vulnerability of certain sites is made difficult by the stringent requirements for the handling of SVAs. SVAs, mandated by NJDEP, are only available on the actual facility site. When an official at the NJDEP was asked how first responders and regulatory agencies such as the NJDEP could be kept up to speed on site vulnerability, he replied that the SVAs were more of a "self-help tool" for the facilities to use than state planning documents. He said the facilities use this tool to modify emergency response plans that are more widely available to first responders and policymakers.[285]

This leads one to believe that potential delays can occur when transferring updated vulnerability information from facilities to first responders. Also, it is unclear whether first responders or other agencies involved in chemical security receive a rationale for a why a certain update was made to the SVA. Thus, if an attack were to occur in between the time a facility updated its latest SVA and before being passed on to concerned parties, emergency crews could be reaching a chemical incident not knowing all the facts and therefore not prepared for what they are facing. Even more troubling is the fact that the SVAs are maintained at the facilities, so that if a devastating attack were to befall a facility, all the necessary information to respond to the crisis may be unable to be accessed or destroyed.

Uniformity of Local Emergency Planning Commission Management and Operations

Since the degree of LEPC planning is solely under the authority of New Jersey municipalities, LEPC management and operations may differ greatly by municipality.[286] For instance, a great deal of variance exists regarding who sits on the LEPC and what level of public access is available to emergency plans or meetings. As such, uniformity across LEPC plans and operations may be lacking statewide. Additionally, some officials have indicated that since LEPCs operate as the central local grant-management operator, different interpretations of LEPC roles may exist. Some view their mission in a pecuniary fashion while others focus more on planning (as was their original intent).[287] Locally-based constraints or philosophies may also degrade the degree of uniformity of planning quality across LEPCs. Potentially, LEPCs may apply varying levels of meticulousness or effort into planning based on their view of the importance of planning, proximity to a chemical facility, or level of local resources available to planning. As a result, New Jersey is exploring the option of providing guidance to LEPC management, but at this point the lack of uniformity represents a statewide gap.

Local Emergency Planning Commission Regional Coordination

Gaps exist in the regional coordination efficacy of LEPC emergency response plans. While the SERC is responsible for coordinating LEPC plans on a regional basis – it is generally held to be effective in this mission – it does not coordinate the planning of LEPCs across state borders.[288] The inability to ensure LEPC coordination on an interstate basis is a critical gap in chemical security in New Jersey and the surrounding region. While the SERC may be able to locate useful resources, ensure collaboration, and increase efficiency in emergency response to chemical incidents within in New Jersey, it misses potentially valuable resources and relevant plans that exist in neighboring states. Thus, since the level of interstate coordination regarding emergency response plans is mixed, the potential exists for LEPC plans to fail to incorporate important and potentially valuable out-of-state important resources or response plans into its planning process.

Statewide Emergency Response Commission and State Task Force Alignment

The planning function performed by the SERC is a critical aspect in building effective cross-municipal and regional emergency response plans through the review, coordination, and communication of municipal emergency response plans. Since a great deal of chemical incident response planning is performed at the municipal level through Local Emergency Response Committees, responsibility for coordination on a regional basis and for effective distribution of resources falls to the SERC, particularly as New Jersey places growing emphasis on regional partnerships.[289] Concurrently, the New Jersey Domestic Security Preparedness Task Force (NJDSPTF) controls domestic preparedness, including chemical security, within New Jersey. It is apparent that both the SERC and Task Force cover similar missions, with the SERC focusing largely on a critical subset of the domestic preparedness function performed by the Task Force. However, the two bodies are not currently as closely aligned as would seem necessary.[290] The SERC currently reports to NJDEP and NJOEM rather than to the NJOHSP or the Task Force, which would be more logical choices considering the SERC's role in domestic security planning. Discussions are underway in New Jersey to increase the role and visibility of the SERC beyond solely coordination functions.[291] Greater alignment of the SERC and Task Force would likely make both statewide and local planning more efficient and better informed.

Regional and Interstate Coordination

New Jersey officials disagree on the level and efficacy of regional and interstate coordination in chemical incident planning and response. Clearly, accidental or deliberate releases of toxic chemicals in certain facilities may have extremely important regional or even interstate effects.[292] Thus, regional and interstate planning should be occur on a regular basis between New Jersey municipalities, counties, state agencies, and their partner agencies in New York State, New York City, Delaware, and Pennsylvania. Currently, at least one public safety official interviewed for this report did not feel that sufficient regional or statewide planning between New Jersey, New York City and New York State, and relevant federal government, Coast Guard, and Port Authority Officials was occurring.[293] Additionally, others argued that regional, and particularly inter-state, information sharing for both planning and response existed but that it was not routine and often did not effectively reach emergency responders in other states.[294] Conversely, other New Jersey officials felt that regional planning was strong and was growing.[295]

It must be noted that the New Jersey Domestic Security Task Force has made the regionalization of planning and response an increasingly important goal, exemplified by the increased use of regional funding plans, county coordinators, and pooling of equipment, assets, and CBRNE teams.[296] Several officials mentioned that coordination in planning and response with the Port Authority of New York and New Jersey was excellent and routine.[297] Due to its status as a bi-state agency, the Port Authority may serve as a useful regional coordinating body or broker in the future.

Additionally, several officials mentioned that regular regional and interstate exercises were prevalent and are a critical relationship-building factor for pursuing effective regional planning. However, the information sharing and coordination that goes on between exercises is not formalized or routine.[298] Others mentioned that New Jersey's decentralized, home rule system of planning often does not align well in practice with the more regimented systems in place in New York State and New York City.[299]

Overall, it is clear that disagreement exists on the level and effectiveness of regional planning in New Jersey. Some areas, including in-state regional pooling of resources, and regional exercising, seem strong or at least functional. Other areas of regional coordination – particularly inter-state coordination and formal information sharing with emergency responders across state lines – are weak or characterized by unclear levels of efficacy or structure. Information sharing with New York and Pennsylvania appear to be particular areas of concern.[300] Areas for development include harmonization of evacuation plans, formalized interstate information exchange between emergency responders, better aligning New Jersey home-rule networks with New York State and New York City systems, and standardization of situational awareness between regional and interstate actors.

Regulatory Discrepancies

The overlapping regulation of plants by different agencies makes it harder to understand what guidelines or preparations a facility uses to prevent a terrorist attack or a chemical disaster. Under the New Jersey Toxic Catastrophe Prevention Act (TCPA) and other New Jersey laws, chemical facilities are required to store regulated chemicals a certain way and are required to make preparations and conduct drills for dealing with the potential release of chemicals. However, the Environmental Protection Agency (EPA) may regulate the same chemicals and its rules and requirements may differ with TCPA regulations. NJDEP also has a system for ranking plants in terms of the threat they pose while the EPA does not have a rating system. Thus, when one looks at a facility, one could have a different perception of how dangerous the plant is based on which evaluation one reviews. In other words, a plant that was deemed a Tier I, or high danger plant, under TCPA guidelines, might appear differently under the federal system of categorizing plants.

On top of this, the entry of the Department of Homeland Security (DHS) into the regulatory scene complicates matters further. Through preemptive power, DHS regulations will implement a system that might invalidate existing New Jersey regulations.[301] Also, with multiple regulatory systems in place, there are several databases of information. The various sources of information cloud situational awareness when analyzing the potential danger of each plant, and when responding to incidents and releases.

Public Awareness

Historically, both the state and federal governments have done an admirable job providing information about the risks present at the site, mitigation techniques, and emergency response plans to the public; this has changed somewhat in the wake of the September 11, 2001 terrorist attacks. The EPA removed the RMPs from the sites from their website, and required access to a federal reading room in order to obtain them.

New Jersey has taken far more significant steps to block this information from the public. Under the Domestic Security Preparedness Act and Governor Executive Order 21, the State was authorized to block the release under the Open Public Records Act (OPRA) of any information that might be of a sensitive nature, including the state RMPs for the facilities regulated under TCPA. Other reports required of the facilities by the NJDSPTF, particularly the SVAs, are also kept from public access.[302]

Homeland Security Mission Add-On Function May Force Tradeoffs in Agency Mission

As already noted, New Jersey institutes sector-specific homeland security planning through existing state agency functions; sector planning is an add-on function. In many cases, this add-on function may run contrary to agency missions, forcing tradeoffs in mission pursuits. For instance, in the chemical security sector, NJDEP is the lead agency. A key mission of NJDEP is to pursue "right-to-know" regulations within the chemical sector through statutes such as EPCRA, Clean Air Act (CAA) 112(r), and TCPA. Each of these laws requires some degree of facility reporting and community right-to-know aspect – be it Tier II reporting or emergency management planning under EPCRA or Risk Management Plans (RMPs) under CAA 112(r) or TCPA.[303] Prior to 9/11 and the resulting added security functions in New Jersey, this information was largely publicly available. However, the security add-on function that NJDEP has under the Domestic Security Preparedness Act has led to the restriction of much information, particularly of previously available right-to-know data such as RMPs. Furthermore, the Domestic Security Act and Executive Order 21 created exemptions to New Jersey open record requirements specifically for chemical security information and right-to-know data.[304] In this regard, due to its new security functions, NJDEP is now charged with restricting access to its own right-to-know data in certain circumstances. The tradeoff between open right-to-know information, which is key to the mission of NJDEP, and restricting sensitive security information has been a difficult issue to mediate within NJDEP.[305]

Homeland Security Mission Add-On Function May Strain Agency Resources

The emergency management function in the State of New Jersey was established by Governor Brendan T. Byrne via Executive Order 101 in 1980 and resides in the Office of Emergency Management in the Division of State Police.[306] Additionally, the Statewide Emergency Operations Plan sets out general statewide authorities, responsibilities, and plans to respond to a number of different emergency events, including chemical incidents.[307]

While emergency management protocols in New Jersey are generally clear, homeland security planning functions (including chemical security planning) at the state level tend to build on existing agency expertise, systems, and missions, and are thus more fluid and dynamic. Under the 2001 Domestic Security Preparedness Act, administration, security planning, and regulation of 20 homeland security "sectors" in New Jersey is granted to existing state agencies with expertise in each individual sector. (It should be noted that these sectors are currently being restructured to align with DHS.) For instance, the NJDEP is the lead agency for chemical security planning and regulation.[308] Thus, administrative planning and management of individual homeland security sectors is a near 100% "add-on" function of existing state operational agencies in New Jersey.[309] The additional resources required of each sector lead agency (staff, monetary, resources, time, etc.) varies by agency and functional area. Some agencies (such as NJDEP) may find that a security add-on function is not a great burden. Others may find that it is a tremendous burden on their operations and that it detracts from their original mission. Overall, it does not appear that the State of New Jersey has experienced great difficultly in this area.[310] However, states with greater fiscal or capital constraints may experience greater friction and push-back from agency leads. Thus policymakers interested in following New Jersey's model should be aware of existing agency resources when implementing security add-on functions.

Richard Cañas, the Director of the New Jersey Office of Homeland Security and Preparedness, indicates that the fashion in which federal homeland security funding is provided to New Jersey may cause difficulties in planning. Cañas notes that overall homeland security funding to state and local stakeholders has decreased by over 50% in the last four years and that New Jersey had recently experienced a 5% reduction.[311] At the same time, the Department of Homeland Security is asking state and local partners to take an increased role in counterterror and homeland security, and requiring them to apply increased resources to these roles.[312] However, current funding through the State of New Jersey is only sufficient to cover regular security operations. The additional actions being asked of the State – in expanded counterterror and homeland security actions and funding expertise-building – is driven by national policy. As such, federal funding should be applied. Cañas notes, "it's not like [we] weren't busy before all this started."[313]

Concurrently, homeland security planners in New Jersey cannot predict what level of funding Congress will appropriate to the State, and as such, find it very difficult to effectively plan for the upcoming fiscal year.[314]

Therefore, while the threat to security in New Jersey has not decreased, funding has decreased and predicting future appropriations is difficult.[315] At the same time, federal partners are pressing New Jersey and other states to make greater contributions to counterterror and homeland security. These factors make homeland security planning, including planning within the chemical sector, extremely difficult.

Further Research

Research for this report was limited in scope because of the initial definition of the problem and limited time. The following is a list of topics that would provide greater insights into the chemical security situation in New Jersey.

Topics for further research:

- Further evaluation of the level of preparedness and response capabilities of the stakeholders in the region should be undertaken. In particular, municipal and county level first responders should be consulted to verify that their assessment of the preparedness situation matches that of state level officials. Furthermore, their level of familiarity with the chemical facilities, their personnel, and their plans should be more fully assessed.
- More information about the facilities' operations, security, and emergency plans should be evaluated. A clearer picture of the current private sector efforts to mitigate an attack or accidental release could be gained if researchers are granted access to secure information.
- Interviews should also be conducted with agencies in charge of preparedness and response in neighboring jurisdictions. Regional coordination would be imperative in the case of a large chemical incident.

Endnotes

[1] This report bases a large part of its research on interviews and email exchanges with the following individuals: Paul Baldauf, Assistant Director, Bureau of Radiation Protection and Release Prevention, New Jersey Department of Environmental Protection; Thomas Giordano, Recovery Bureau, Preparedness Unit, New Jersey Office of Emergency Management; Gene Haplea, Deputy Chief, Critical Infrastructure Protection Office, New Jersey Office of Homeland Security and Preparedness; John Paczkowski, the Port Authority of New York and New Jersey; Gary Sondermeyer, Chief of Staff, New Jersey Department of Environmental Protection; Bob Van Fossen, Assistant Director, Bureau of Emergency Response, New Jersey Department of Environmental Protection. In certain cases, individuals did not wish to be attributed for their candid commends and researchers chose to respect these requests in all cases.

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