

Community Impact: Chemical Safety, Harvey, and Delay of the EPA Chemical Disaster Rule

How the Trump Administration's Delay of the Risk Management Plan Rule Causes Harm to People in the Wake of Hurricane Harvey

On August 25, 2017, Hurricane Harvey, a Category 4 storm, slammed into Houston, Texas, and the surrounding area. Effects on life and property stretched far and wide. The storm's impact on Houston's petrochemical facilities exposed vulnerabilities in our national chemical safety policy. A chemical safety rule finalized in January 2017 would have helped to address these vulnerabilities had the Trump administration not delayed it.

In January 2017, the Environmental Protection Agency (EPA) updated its Risk Management Program (RMP) regulations in a set of amendments (also known as the Chemical Safety Rule or the Chemical Disaster Rule) to avoid and reduce harms like those experienced in Houston. This report details the likely and possible ways that the rule would have mitigated or avoided Harvey-related impacts on communities had the Trump administration not delayed it until February 19, 2019.

Toxic Conditions

While Harvey's consequences put a spotlight on chemical safety and environmental justice in Houston, these challenges existed long before the storm. Historically, chemical safety policies in the United States have been inadequate in preventing disasters, managing risks, and providing risk information to the public. That's why EPA originally issued the chemical disaster rule, "to reduce the probability of future incidents that impose external costs, and reduce the magnitude of such costs on nearby populations" (EPA 2016). Low-income communities and communities of color living in close proximity to these high risk chemical facilities have often experienced the brunt of such inadequacies. Enhanced chemical safety policy is sorely needed to help reduce and prevent these consequences.

ENVIRONMENTAL JUSTICE AND CHEMICAL SAFETY

Chemical disasters occur in communities nationwide, but their impacts fall particularly hard on workers, first-responders and

fenceline communities. The EPA's definition of *environmental justice* is as sweeping as the reach of environmental problems and disasters: The agency defines *environmental justice* as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (EPA 2017b). Over 170 million people live near 12,500 facilities that use or store hazardous chemicals and research shows that people residing in communities close to chemical facilities ("fenceline communities") are disproportionately African American or Latino, and have higher rates of poverty, lower incomes, housing values, and education levels than the national average (EPA 2016, EJHACPR 2014). One in three US schoolchildren are within the vulnerability zone of a hazardous chemical facility (Frank and Moulton 2014).

The relocation of low-income residents away from these polluting sources is not a realistic option without assistance. Cycles of poverty, institutional racism, hopelessness, fear, and complacency are the products of failed attempts to address inequities and disparities across a host of social issues. These factors warrant a deeper understanding of and respect for the issues facing environmental justice communities—not only regarding the intersection of race and disproportionate effects of pollution, but also the societal systems that have allowed these situations to develop.

The Environmental Protection Agency (EPA) estimates that approximately 150 "catastrophic" accidents occur each year in regulated industrial facilities—and less severe accidents are even more common (EPA 2017c). As defined under the previous rule, a catastrophic release is "a major uncontrolled emission, fire, or explosion, involving one or more regulated substances that presents imminent and substantial endangerment to public health and the environment" (EPA 2013). According to the EPA, in the last decade, nearly 60 people died, approximately 17,000 people were injured or sought medical treatment, and almost 500,000 people were evacuated or sheltered-in-place as a result

of accidental releases at chemical plants (Stanislaus 2017). For example, a fire at Chevron’s Richmond, California, refinery in 2012 caused 15,000 people to seek medical treatment. A West, Texas, fertilizer plant disaster in 2013 killed 12 emergency responders and three members of the public, injured more than 260 people, and damaged more than 150 off-site buildings. A 2014 chemical spill in West Virginia left thousands of residents without clean water. The US Chemical Safety and Hazard Investigation Board’s (CSB) analysis of the event in West, Texas, found failure of the insurer to conduct safety inspections or provide an adequate level of coverage to the plant, and shortcomings in emergency response—including pre-incident coordination with the volunteer firefighters. It concluded that regulatory changes could have prevented that disaster (CSB 2016). These incidents reflect the most severe reported cases. Less severe accidents are also harmful and mostly unreported or invisible to the broader public; indeed, 425 chemical accidents occurred in the twenty-eight months between April 2013—the month of the West, Texas, fertilizer facility explosion—and August 2015 (CPCD n.d.).

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HOUSTON AT RISK

Houston is especially vulnerable to chemical risks. Exposure to toxic air pollution in the Houston metropolitan area has long been a concern, especially for low-income communities and communities of color along the Houston Ship Channel. In this area, the absence of citywide zoning laws allows for a large concentration of oil refineries and other heavy industry in close proximity to residential areas. This legal gap makes it possible for a chemical facility to be sited next to a school, risking the health and safety of those students in the event of a chemical disaster. The health impact on these populations from environmental degradation is amplified by other negative socioeconomic and health factors, such as the lack of access to health care, healthy foods, and public transportation, along with stress from poverty, unemployment, and crime (Prochaska et al. 2014; O’Neill et al. 2003).

A recent report from the Union of Concerned Scientists and Texas Environmental Justice Advocacy Services (tejas), *Double Jeopardy in Houston: Acute and Chronic Chemical Exposures Pose Disproportionate Risks for Marginalized Communities*, found that inequities in the distribution of

chemical risks and exposures—including the uneven distribution of polluting industrial sources, cancer risks, and respiratory hazards from toxic air pollution—exist in Houston. That report compared the proximity to RMP facilities as well as daily and long-term exposures to toxic air pollution in two communities on Houston’s east side (the predominately Latino Harrisburg/Manchester and Galena Park) with two wealthier, majority white communities in west Houston (West Oaks/Eldridge and Bellaire) (White et al. 2016).

The study relied on an EPA database of industrial facilities that are required by law to submit a Risk Management Plan (RMP) containing information about accident risks, prevention measures, and emergency response plans. Researchers found that 90 percent of the population in Harrisburg/Manchester and almost 40 percent of the population in Galena Park live within one mile of an EPA RMP facility, compared to less than 10 and less than 15 percent of Bellaire and West Oaks/Eldridge residents, respectively. The report also shows substantially higher concentrations of toxic air pollutants and higher risks of cancer and respiratory illness in the two east Houston communities. Overall chemical exposures in Harrisburg/-Manchester were 12 and more than three times higher than in West Oaks/Eldridge and Bellaire, respectively, and exposures in Galena Park were 17 and almost five times higher (White et al. 2016). The disproportionate exposure to toxic pollution and the more severe impact on lower-income communities of color violate the principles of environmental justice and underscore the need to adhere to those principles and attend to the underlying issues.

THE EPA RISK MANAGEMENT PLAN: IMPROVING COMMUNITY SAFETY

In response to the April 17, 2013, West, Texas, disaster at a fertilizer plant—which leveled a neighborhood and killed 15 people—President Barack Obama issued Executive Order 13650 in August of the same year, mandating an enhanced chemical safety policy. Following the executive order and responding to community calls for action, in late 2016, the EPA updated its RMP rule. The amendments to the EPA RMP rule are designed to strengthen the 1996 Risk Management Plan rule governing public and first-responder safety at chemical facilities (EPA 1996).

The new rule makes several improvements to federal oversight of chemical safety issues. It requires improved facility safety measures, including facility operators to execute the following: annual coordination with local emergency responders, annual notification exercises to ensure correct emergency contact information for communities and first responders, and field and tabletop exercises to practice chemical disaster emergency management in case of an

accident. The new rule requires root cause analysis and more detailed investigations be conducted after an accident to establish the main cause of the accident and prevent it from reoccurring. It also requires refineries, chemical manufacturers, and pulp/paper mills to conduct safer technology and alternatives assessments; in some cases, it requires a third-party audit of accidents (EPA 2017a).

Lastly, the rule requires certain facilities to make some information more accessible to the public. Facilities are required to provide basic information—such as safety data sheets and local emergency preparedness plans—to the public upon request. Under the previous rule, this information was less accessible, requiring community members to travel to EPA federal reading rooms for public health and safety information about the facilities in their neighborhoods. The updated rule does not ask the facilities to disclose additional information over what was required under the previous rule. Facilities are also required to hold a public meeting within 90 days of a chemical accident.

The process to improve the original chemical safety regulation was extensive and rigorous. The summer following the issuance of Executive Order 13650, the EPA published a Request for Information in the *Federal Register* to obtain information from industry, fenceline communities, workers, first responders, environmental justice organizations, and other stakeholders on how best to modernize chemical facility safety in the United States. The rulemaking process that followed included multiagency input, public listening sessions throughout the country, multiple national webinars, a small business advocacy review panel, a regulatory impact analysis, a notice and comment period, and extensive interagency and Office of Information and Regulatory Affairs review.

Industry and community stakeholders were heavily involved in a multiyear process to update this rule through a collaborative process with the Department of Homeland Security, the Department of Justice’s Bureau of Alcohol, Tobacco, Firearms, and Explosives, the Occupational Safety and Health Administration, and the Chemical Safety Board. The Union of Concerned Scientists, along with more than 60,000 stakeholders and interested parties over the course of three years, provided numerous comments to carefully inform and

help finalize the EPA’s RMP rule, which would require covered chemical facilities to follow common-sense best practices that enhance emergency preparedness and make communities safer. The final amendments to the EPA RMP rule were finalized on January 13, 2017, and scheduled to take effect on March 14, 2017.

On March 13, 2017, the EPA, under Administrator Scott Pruitt, delayed implementation of the rule for 90 days, after receiving a petition from members of the chemical industry, including the American Chemistry Council, the US Chamber of Commerce, and the American Petroleum Institute (RMP Coalition 2017). On April 3, 2017, the EPA issued a proposed rule to further delay the EPA RMP rule until February 19, 2019, almost two years later than the original implementation date. After receiving public comments from the Union of Concerned Scientists, International Association of Fire Fighters, the United Steelworkers, community groups, and other stakeholders, on June 14, 2017, the agency published a final rule delaying the effective date to February 2019 (EPA 2017c).

While modest, the 2017 updates are critical improvements to the nearly 20-year-old RMP rule. It is crucial that the EPA implement the rule and end the delay, because the science and community concerns are clear. This rule helps low-income communities of color, first responders, and chemical facility workers stay safe in the case of a chemical disaster, and the delay now hampers public safety.

Harvey’s Toll on Chemical Facilities and Surrounding Communities

After wreaking havoc in the Caribbean, Hurricane Harvey made landfall near the Texas cities of Rockport and Port Aransas on August 25, 2017, just shy of reaching the windspeed strength of a Category 5 hurricane. As it moved onshore, the storm caused massive damage to Aransas County, leveling buildings, leaving many without power or water, and destroying entire blocks (NOAA 2017). Most notably, the storm and subsequent weather pattern led to catastrophic levels of flooding across the region. The warm sea surface temperatures in the Gulf of Mexico continued to drive rain to the region at extreme levels. A population of more than 6.7 million people received at least 20 inches of rain in seven days. One rain gauge near Houston recorded 48.20 inches in the days following Harvey’s landfall—the highest rainfall amount in a single storm for any place in the continental United States ever recorded (NOAA 2017). As detailed below, Houston’s chemical industry was not spared from the massive damage of the storm.

This rule helps low-income communities of color, first responders, and chemical facility workers stay safe in the case of a chemical disaster.

THE ARKEMA CROSBY DISASTER

Crosby, Texas, located northeast of Houston, lies within the 100-year floodplain—meaning that in any given year, there is a 1 percent chance of a flood occurring in that area (Dempsey, Ellis, Blakinger 2017). Yet the Arkema facility—a plant that produces highly flammable liquid organic peroxides (used primarily in the production of plastics)—was unprepared to handle the disaster that came as a result of power loss and poor planning:

- By August 27, within two days of the hurricane making landfall, the Arkema facility was standing in six-foot-high floodwaters, which cut the main power source and ultimately inundated backup generators (Newkirk 2017).
- On August 28, the backup generators failed, leaving Arkema without the refrigeration needed to cool the volatile organic peroxides on site. A dozen staff moved tens of thousands of decomposing, unstable chemicals into freezer trailers. After refrigerators lost power, plant personnel were evacuated.
- On August 30, fearing imminent explosion, government officials established a 1.5-mile evacuation zone after they assessed Arkema’s chemical inventories.
- Early on August 31, the first of nine chemical containers holding 500,000 pounds of volatile organic peroxides exploded. Two more trailers ignited Friday, September 1. The rest of the containers were intentionally ignited on September 3, 2017, to hasten the inevitable explosions.
- Fire erupted and 40-foot plumes of black smoke clouded the air. First responders reported that they became immediately ill upon being exposed to fumes from the explosion and that they did not have accurate information about the chemicals at the facility (Dempsey and Blakinger 2017).
- Nearly 300 households in a town of fewer than 3,000 were evacuated. This evacuation was wholly inadequate, as samples collected several miles outside of the evacuation zone were found to contain toxins, including volatile organic compounds and dioxins (Dunklin 2017).

The Arkema facility has had previous violations and incidents, including a 2006 fire, also caused by decomposition of organic peroxides (Bajak, Dunklin, and Schmall 2017). The missed learning opportunities after Arkema’s 2006 incident reveal how, without enhanced chemical safety policies, disasters are unfortunately not mitigated or avoided. The enhanced chemical safety provisions found in the EPA’s RMP rule might have mitigated the Arkema Crosby disaster.

Yet a delay in the rule by the Trump administration prevents facilities from managing such risks in the future. In many ways, the updated EPA RMP Rule is designed for facilities such as Arkema to analyze and learn from such an incident. If the company had implemented past incident investigation findings and strengthened emergency response coordination, it could have avoided the Crosby disaster in 2017. Outlined below are the revised provisions in the Chemical Disaster Rule that could have mitigated or prevented accidents like these.

CONDUCT THOROUGH ROOT CAUSE ANALYSES OF ACCIDENTS AND NEAR MISSES

The update to Section 68.81 of the EPA RMP rule, titled “Incident investigation,” requires facilities to adequately investigate and learn from past incidents to help prevent future incidents of the same kind. This provision requires a root cause analysis, with enhanced information requirements that include both direct and indirect contributing factors to the incident.

If this provision had been in place after the 2006 incident at the Arkema facility, it would have required a wider-ranging investigation and assessment that would likely have resulted in a root cause finding, even though the 2006 incident was not due to flooding (Bloomer and Konschnik 2017). Texas Commission on Environmental Quality (TCEQ) records indicate that the 2006 fire resulted from the improper storage of a pallet of organic peroxide (Bajak, Dunklin, and Schmall 2017), indicating that the broader processes used for storing organic peroxides and keeping them from igniting would have required investigation. This would likely have resulted in recommendations that would have directly addressed the causes of the 2017 incident, perhaps resulting in better primary or backup storage and refrigeration systems.

If such a requirement were in effect now, in the aftermath of Harvey, a full incident investigation team and report (due within 12 months) would be in progress – and ultimately for this type of incident, Arkema would have to complete an in-depth root cause analysis. The updated provision to the Chemical Disaster Rule requires an investigation of any incident that could have reasonably resulted in the release of an RMP chemical, like the massive fires and explosions that occurred on-site at the Arkema facility, even if the source of the incident is not itself an RMP chemical, like the organic peroxides. The goal of expanded incident investigation would be to help uncover the direct cause of the fires, and it could also help clarify what caused the refrigerated containers at the site to stop functioning and prevent the fire and explosions after the flooding began. Importantly, recommendations would need to be made broadly for how to plan for future floods, including methods for effectively implementing these plans, crucial for mitigating incidents and exposures during future hurricanes.

IMPLEMENT SAFER TECHNOLOGIES AND TESTING PROCEDURES

The update to Section 68.67 of the EPA RMP rule, titled “Process hazard analysis,” ensures that in conducting these analyses every five years, facilities will need to consider “inherently safer technology or design,” as well as passive, active, and procedural measures for managing risk. Further, facilities will need to consider the practicability of the technologies and designs that are considered in their analyses. Any adoption of the technologies or designs arising from these analyses could play a significant role in preventing future incidents and harms.

If this provision had been implemented fully or were in force so Arkema knew it would ultimately be responsible for implementing it, many of the inadequate technologies and processes that failed to prevent this year’s incident would ultimately be analyzed to help strengthen safety in the future. If practical replacements to existing systems had been found, new systems would have been able to prevent similar fires and explosions from happening again. For example, backup generators and storage vessels for volatile chemicals, which were not raised above known possible flood levels (Krauss, Tabuchi, and Fountain 2017), might have been identified and relocated. The facility’s emergency plans that were submitted to the EPA in 2014 identified hurricanes and power losses as major hazards (Bajak, Dunklin, and Schmall 2017). But these plans failed to assess what the facility should do if it had to deal with either type of scenario (Bajak, Dunklin, and Schmall 2017), a type of analysis which has not been required prior to the new EPA RMP rule.

The facility might have also assessed how to begin using materials to neutralize the on-site organic peroxides in case of emergencies. Facility officials acknowledged the day after the original fire in 2017 that the absence of a means of neutralizing the peroxides was what resulted in the original order to move the chemicals (Bajak, Dunklin, and Schmall 2017), which led to the eventual incident.

COORDINATE WITH LOCAL EMERGENCY RESPONSE AGENCIES

The update to Section 68.93 of the RMP rule, titled “Emergency response coordination activities,” requires facility operators to engage in annual coordination and ensures that the facility enables important emergency response mechanisms. Changes in facility information, such as changes to its emergency action plan and emergency contact information, must be provided to local emergency responders. Facility officials must document the contact information of local authorities.

The update to Section 68.96 of the RMP rule, titled “Emergency response exercises,” requires facilities to hold regular notification exercises and emergency response field exercises, which must be coordinated with local emergency response officials.

If these provisions had been in place in the years prior to Hurricane Harvey, the facility would have had the appropriate contact information and protocols for communicating with first responders who were managing the evacuation perimeter that was established prior to the incident. If the rule were in force now, Arkema would have had to fully comply with these measures before the 2018 hurricane season begins, and may well have begun that process before this season’s disaster.

With the first explosion on August 31, these responders were not informed by Arkema officials that anything had occurred, resulting in their exposure to toxic fumes and significant medical harm (Graves v. Arkema 2017). Officers began vomiting and were unable to breathe immediately after being exposed to the fumes (Graves v. Arkema 2017). And after this first group of responders was exposed, continued poor instruction from the facility led to subsequent exposure to toxic chemicals for other emergency medical personnel who arrived on the scene (Graves v. Arkema 2017). These responders, as they worked to assist the officers, also began to vomit and struggled to breathe, and all were subsequently taken to a local hospital (Graves v. Arkema 2017). The responders’ experience directly conflicts with statements made by Arkema officials at a press conference in the days prior to the incident, which relayed that the chemicals at the plant were not toxic or harmful (Graves v. Arkema 2017).

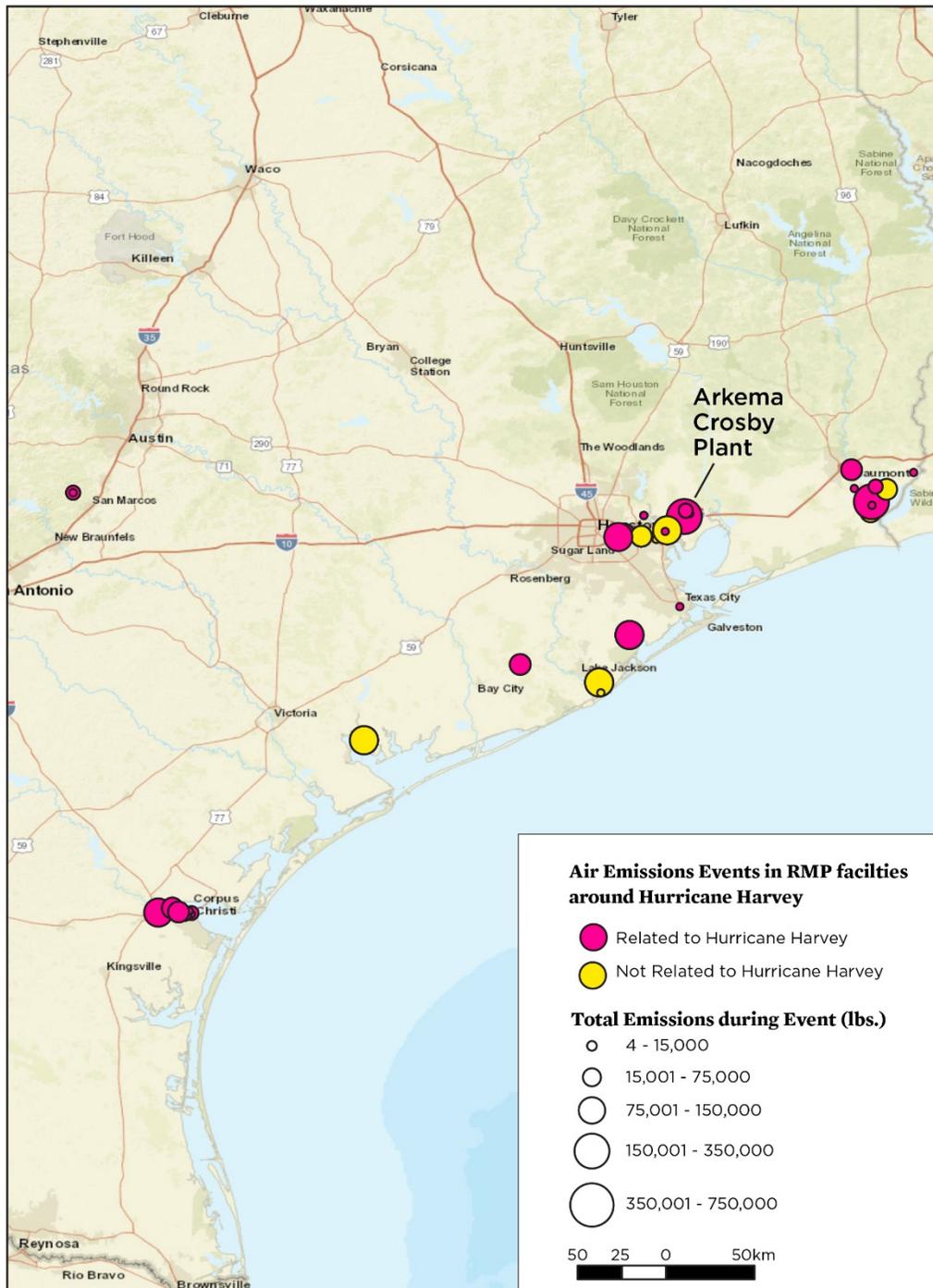
A requirement to engage local officials in conducting field exercises would have ensured that first responders were aware of the potential dangers and also knew how to protect themselves from exposures. Responders, for example, might have known to prepare with appropriate equipment to protect themselves and the community or to evacuate their posts or move the perimeter to a greater distance.

If these requirements were in effect now, in the aftermath of Harvey, the facility operators and local officials would begin to develop good coordination practices and all local officials could be certain that Arkema would provide them with up-to-date information and procedures no later than the spring of 2018. These provisions would help ensure that first responders who help to protect the public during future incidents could mitigate their own risks of being exposed to dangerous chemicals.

Effects on Regional Air Quality

Many RMP facilities around Houston reported excess air emissions events in the days preceding and immediately following Hurricane Harvey’s landfall (see map on p. 6). When petrochemical plants shut down and restart, emissions can increase, sometimes to unsafe levels (CSB 2017). Additionally, damage from the storm or the floods associated with it also lead to additional chemical releases.

Air Emissions Events from RMP Facilities around Hurricane Harvey



Many Risk Management Plan facilities in East Texas reported excessive air emissions to the Texas Commission on Environmental Quality between August 31 and September 7, 2017.

SOURCE: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY 2017..

Event Types for RMP Facility Air Releases, August 31–September 7, 2017

Event Type	Number of Facilities	Percentage of Facilities
Air shutdowns	13	9.7
Air start-ups	15	11.2
Emissions events	95	70.9
Excess opacity	2	1.5
Maintenance	9	6.7

The majority of air emissions events within range of Hurricane Harvey in East Texas were not part of regular shutdowns, start-ups and maintenance, but were unanticipated emissions events related to the storm or another event.

SOURCE: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY 2017.

Out of 186 total air emissions events reported to TCEQ between July 31 and September 7, 2017, 91 (48.9 percent) were Harvey-related, and 134 (72.0 percent) were in RMP facilities (see the table on p. 7)(TCEQ 2017). A total of 1,473,184 pounds of 37 contaminants subject to the RMP rule were released in Harvey-related incidents, and an additional 5,481,871 pounds not related to Harvey were released during reported incidents in the same period (TCEQ 2017).

Chemical Releases from RMP Facilities during Harvey and Beyond

The flooding associated with Harvey submerged parts or all of many of the chemical facilities around Houston. Since many petrochemical facilities are sited on the coast, they were especially vulnerable to storm surge and flood risks (Goldman and Carlson 2015), even without consideration of catastrophic flooding levels.

In advance of the storm, facilities began to shut down. This process includes some inherent risks and causes chemical releases beyond those emitted under normal operations. Starting facilities back up also involves risks. To that point, the CSB issued a statement urging facilities to be sure to follow protocol and be cautious in re-starting operations (CSB 2017). Many facilities followed the proper steps and endured the storm without issue. However, at some facilities, chemicals were released into the surrounding areas.

OTHER CHEMICAL RELEASES IN HARVEY'S WAKE

Arkema's Crosby facility was not the only chemical facility to release toxic emissions during Hurricane Harvey. For example,

rainfall on the roof of a tank at Valero's Houston refinery in the Manchester community caused the roof to partially sink, resulting in the release of air pollutants—including approximately 92,266 pounds of unspecified volatile organic compounds, 1,881 pounds of benzene and 16,775 pounds of hexane (TCEQ 2017). Similarly, at the Exxon Mobil refinery in Baytown, the Marathon Texas City Refinery, and Shell Oil's Deer Park facility, stress on tank roofs caused by Harvey's rainfall caused product to leak, resulting in illegal emissions of volatile organic compounds, including almost 3,000 pounds of benzene from Shell (TCEQ 2017). The Magellan Midstream pipeline company located in the community of Galena Park also had the largest spill during the storm: approximately 11,000 barrels of gasoline were released into the floodwaters and thousands of pounds of volatile organic compounds were released into the air (Blum 2017). The Arkema Crosby facility was just one of many affected by the floodwaters and heavy rain, and that ultimately had chemical incidents that put public health and safety at risk.

OTHER RECENT CHEMICAL RELEASES ACROSS THE COUNTRY

Chemical incidents are not rare, nor are they solely caused by unforeseen circumstances. They are common occurrences that put public health and safety at risk, and the RMP rule would standardize prevention and emergency response. Just this year, for example, Olin Corporation, on February 15, failed to notify McIntosh, Alabama, residents of a chlorine gas leak in the amount of 738 dry pounds (Weis 2017). Suncor Energy's oil refinery, on March 11, spewed 500 pounds of sulfur dioxide gas and emitted up to 1,120 parts per million of carbon monoxide over Denver, Colorado (Finley 2017). A Fresh Express warehouse, on June 5, sent five employees and two first

responders in suburban Chicago to the hospital due to an ammonia leak at a food processing facility (Peterson 2017). And these examples are just a fraction of the incidents that happened in the months before Harvey struck Crosby, Texas.

If the rule had been in place before Harvey landed, first responders and community members could have reached out directly to a facility to learn what chemicals were on the premises

The Path Forward: Improving Chemical Safety

Communities—especially those with residents living near the fenceline, as well as workers at industrial facilities—need laws to protect them from chemical disaster risks. While the full updated RMP rule would not have taken effect until March 14, 2017, some critical aspects of the rule would have taken immediate effect. RMP facilities would have had to start training processes for employees and strengthen other safety measures. They also would have begun the process for improved coordination with local emergency officials and completed it by March 2018. In addition, if the rule had been in place in the days before Harvey landed, community members and first responders could have reached out directly to a facility to learn what chemicals were on the premises, and therefore would have been prepared after Harvey made landfall. Facility officials and their teams would have had to begin incident investigations immediately and provide a report within 12 months. Some facilities with pre-2019 deadlines for safer technologies assessments would have had to initiate those analyses. These immediate actions could have influenced all the previously mentioned incidents and helped temper the devastation of a chemical disaster.

Companies might not have been able to anticipate the floods of Harvey when they built chemical facilities, but they should have taken extra steps to increase their preparedness for chemical disasters in the hurricane's wake. Enhanced chemical safety policy is sorely needed to ensure that companies are implementing preventative measures, cooperating with local communities and first responders, and sharing information about chemical risks and emissions in a timely and accessible way.

The Trump administration should implement the common-sense amendments to the EPA RMP rule immediately

to protect communities, workers, and emergency responders and prevent the likelihood of future disasters like the one at Arkema's Crosby facility.

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