

The Impact of Chemical Facilities on Environmental Justice Communities

*Review of Selected Communities Affected by
Chemical Facility Incidents*

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Introduction

On May 17, 2018, the Environmental Protection Agency (EPA) under Administrator Scott Pruitt proposed a rule (EPA 2018a) that effectively reverses almost all of the improvements made by the Obama administration EPA in January 2017 to the EPA's Risk Management Program (RMP). The RMP addresses safety at more than 12,000 of the nation's most hazardous industrial facilities that use or store large quantities of toxic and dangerous chemicals, including refineries, chemical plants, paper and pulp mills, and water treatment and food processing plants (EPA 2016a). In documenting the need for improvements to the RMP, the Obama EPA noted, "Facilities subject to the RMP regulation pose significant risks to the public and the environment. These risks stem from potential accidental chemical releases that can cause fires, explosions, and harmful vapor clouds. Chemical accidents—fires and explosions in particular—not only kill and injure people but can do great damage to property. Property damage can include damage to goods produced, plant equipment and structures, and nearby industrial, commercial, and residential buildings, equipment, and furnishings" (EPA 2016b, p. 83).

The EPA also noted that, in the 10-year period between 2004 and 2013, more than 1,500 reportable incidents occurred at RMP chemical facilities, almost 500 of which had off-site impacts (EPA 2016c). These incidents injured thousands of people, including both facility employees and nearby residents; nearly 15,000 people sought medical treatment and 190 of them were sent to the hospital. These incidents also triggered evacuations and/or shelter-in-place alerts for almost 500,000 people and caused more than \$11 million in property damage. (EPA 2016b, p. 92). Based on these data, the EPA found that approximately 150 catastrophic accidents occur per year among the universe of regulated facilities, and that "most of these serious accidents are preventable if the necessary precautions and actions are taken" (EPA 2015). When deaths and injuries to workers and damage to facilities is included, the totals increase to 58 deaths, more than 17,000 people injured and needing medical treatment, and more than \$2 billion in property damage (EPA 2016c). These chemical facility incidents continue to occur frequently, with 458 incidents reported to the EPA under the RMP program from 2014 to 2016 (EPA 2018b).

The 2018 proposed rule clearly notes that the agency intends to remove all measures from the 2017 version that are intended to prevent accidents, despite the potentially grave impacts on workers and the public.

The number of people in communities across the United States who are potentially at risk from chemical facility incidents is huge. A 2014 report by the Environmental Justice Health Alliance for Chemical Policy Reform found that almost 135 million people live within the "vulnerability zones" (the area potentially affected by a worst case chemical release) surrounding the more than 3,400 of the RMP facilities that pose the highest risk (2014). Children are particularly vulnerable to the potential health impacts from exposure to toxic chemicals (WHO n.d.). A 2014 report from the Center for Effective Government (CEG) found that approximately 20 million children (more than one in three of all US children) attend schools in the vulnerability zones from the 3,400 highest-risk facilities (CEG 2014).

Chemical Facilities and Environmental Justice Communities

Especially concerning is the finding that people of color (especially African American and Latino communities) are disproportionately represented in areas close to these facilities, with the percentage of African Americans 75 percent greater, and Latinos 60 percent greater, than for these groups in the United States as a whole. The poverty rate in the surrounding areas is 50 percent greater than for the United States as a whole (EJHA 2014). The 2016 CEG report found that people of color make up nearly one-half of the total population living within one mile of these dangerous facilities and are almost twice as likely as white communities to live in these areas. People of color living in poverty (i.e., household income of less than \$25,000 for a family of four, including two children) (US Census Bureau n.d.a) are significantly more

likely to live in fenceline zones than white communities not living in poverty. The greatest disparities were among lower-income children of color. For example, lower income African American and Latino children are more than twice as likely to live in fenceline zones compared with white children who are living above the poverty line (CEG 2014). An earlier study found that larger, more chemical-intensive facilities tend to be in counties with larger African American populations and in counties with high levels of income inequality. It also found a greater risk of chemical accidents and spills at facilities in counties with larger African American populations (Elliot et al. 2004).

While chemical facility incidents that seriously affect surrounding communities occur frequently, very few receive much public attention beyond the occasional local news report, and even fewer receive investigation by the US Chemical Safety and Hazard Investigation Board, the government agency charged with investigating major chemical facility incidents and providing recommendations to avoid future incidents.

This report highlights several examples of the impact of these industrial chemical facility incidents on the public in surrounding areas, which are often environmental justice communities comprised of low-income people of color, as well as workers at these facilities. The EPA acknowledges that chemical incidents and releases occur frequently and adversely affect communities of color and low-income communities as well as facility employees themselves. The EPA's 2018 proposed rule increases harm on communities when chemical disasters occur. This white paper demonstrates a clear need to implement the 2017 rule that increased information sharing for first responders, fenceline communities, and the broader public, along with a move toward safer technologies and practices at these facilities to limit future disasters.

July 26, 1993: More than 22,000 Seek Medical Treatment Due to General Chemical Corp. Chemical Plant Incident

SUMMARY OF THE INCIDENT

On July 26, 1993, a railroad car onsite at a chemical manufacturing plant in Richmond, California, owned by General Chemical Corporation (GCC) (now Chemtrade West US LLC) released an estimated 70 tons of oleum—a highly concentrated form of sulfuric acid used in manufacturing soap, among other products—when the disc in one of the tank car's safety valves ruptured. Between 4 and 8 tons of sulfur trioxide was emitted when the oleum made contact with the air, forming a white cloud of sulfuric acid 1,000 feet high and up to eight miles wide that engulfed thousands of homes in Contra Costa County. (Note: In January 2014, GCC was acquired by Chemtrade Logistics Income Fund, a Canadian provider of industrial chemicals and services (DKL n.d.), and the facility is now called Chemtrade West US LLC.) The thick chemical fog rolled east and north, growing larger as it moved through densely populated neighborhoods and industrial sections of Richmond, San Pablo, El Sobrante, and Pinole before dissipating over San Pablo Bay.

DEMOGRAPHICS OF THE SURROUNDING AREAS

The communities affected by this release included several low-income communities, predominantly communities of color. Ninety-three percent of the people living within one mile of the facility are people of color, with more than one-half (52 percent) living in poverty (ECHO n.d.a).

POTENTIAL HEALTH IMPACTS

The release sent more than 3,200 people to hospitals with symptoms such as nausea, irritated skin, breathing problems, and burning eyes, mouths, and throats. At least six people were hospitalized with complications of preexisting lung conditions.

Kaiser Permanente Hospital in Richmond treated more than 1,400 patients, Brookside Hospital in San Pablo received more than 600 patients, Merrithew Memorial Hospital in Martinez and its outpatient clinic treated 660, Doctors Hospital in Pinole treated 400 victims, and Alta Bates Hospital in Berkeley treated more than 170. Many others sought

treatment from their own physicians or at neighborhood clinics (Paddock 1993). In total, more than 22,000 people sought medical assistance with approximately 15 people staying in the hospital overnight (CCHS n.d.).

April 6, 2010 – May 16, 2010: 22,000 People Potentially Exposed to Carcinogens Due to BP North America Refinery Incident

SUMMARY OF THE INCIDENT

Five years after a blast that killed 15 workers and injured 170 other workers, the BP refinery in Texas City, Texas, vented more than half a billion pounds of toxic chemicals into the air beginning April 6, 2010, and lasting until May 16, 2010. Over the 40-day period, the refinery emitted 538,000 pounds of toxic chemicals including 17,000 pounds of benzene, a known carcinogen; 37,000 pounds of nitrogen oxides, which contribute to respiratory problems and ozone formation; and 186,000 pounds of carbon monoxide (Knutson 2010).

A fire caused by poor maintenance damaged a seal in the hydrogen compressor, a piece of equipment that captures toxic gases in the refinery's ultracracker used for gasoline refining. Rather than shut down the production operation, BP chose to burn the toxic gases using a flare. However, the flaring process was unable to destroy the magnitude of pollutants being fed into it, and the monitoring equipment at the flare inaccurately indicated that emissions were within allowable levels.

The BP Texas City refinery and chemical plant complex had a long history of incidents that resulted in emissions exceeding Texas regulations, leading the state to sue BP in 2009 for 72 violations related to "excessive emission events" at the Texas City refinery, including seven violations at the same compressor that caused the subsequent 40-day flaring event, citing "poor operational practices" (*State of Texas v. BP Products North America Inc.* 2009). The Texas attorney general then filed a lawsuit against BP related to the 40-day flaring incident, noting that "BP's failure to properly maintain its equipment caused the malfunction and could have been prevented" (Texas Office of the Attorney General 2010). In addition to the state's lawsuit, additional lawsuits were filed on behalf of workers at the refinery and people who live or work in Texas City who also say they were harmed by the BP facility's chemical releases, including the 40-day flaring incident (Wang 2010).

DEMOGRAPHICS OF THE SURROUNDING AREAS

More than one-half (56 percent) of the more than 22,000 people living within three miles of the facility are people of color with 43 percent living in poverty, more than three times the national poverty rate (ECHO n.d.b).

POTENTIAL HEALTH IMPACTS

Health researchers at the University Cancer and Diagnostic Centers in Houston have followed up on the potential health impacts associated with the benzene released from the 40-day event. An analysis comparing nonsmoking adults exposed to the benzene release with unexposed nonsmoking adults found that, "Benzene exposure from the prolonged BP flaring incident caused significant alterations in hematological and liver markers indicating that these nonsmoking residents exposed to refinery chemicals may be at a higher risk of developing hepatic or blood-related disorders" (D'Andrea and Reddy 2014a). The same authors found similar results in smokers and in elderly people (D'Andrea and Reddy 2017; D'Andrea, Reddy, and Mitter 2016).

Especially alarming was a similar pilot study, conducted by the same researchers, of children (< 17 years) exposed to benzene during the 40-day event in comparison with unexposed children. That study found that "children exposed to benzene experienced significantly altered blood profiles, liver enzymes, and somatic symptoms indicating that children exposed to benzene are at a higher risk of developing hepatic or blood-related disorders" (D'Andrea and Reddy 2014b). A follow-up study that expanded the number of exposed children by about 400 percent and almost doubled the number of unexposed children found that white blood cell counts and hemoglobin levels were significantly decreased, and platelet counts and hepatic enzymes were significantly elevated, in the exposed children compared with the unexposed

children. The study authors concluded, “These findings suggest that children exposed to benzene are at a higher risk of developing both hepatic and bone marrow–related disorders” (D’Andrea and Reddy 2016). These disorders include anemia and acute myeloid leukemia, a type of blood cancer, which have been associated with long-term benzene exposures (ATSDR 2007).

June 8, 2010: 23 People Injured and 6 Hospitalized Due to Tulare Iron and Metal Recycling Plant Incident

SUMMARY OF THE INCIDENT

On June 8, 2010, chlorine gas was released from a ruptured, one-ton low-pressure tank being recycled at the Tulare Iron and Metal Company recycling facility in Tulare, California. The Visalia Fire Department measured chlorine levels at 328 parts per million (ppm) near the tank three hours after the release. Chlorine levels were likely much higher when the workers were trying to escape the initial release, and levels for people exposed in downwind nearby businesses were likely quite high. Health studies show 40 to 60 ppm produces lung injury; 430 ppm usually causes death in 30 minutes, and 1,000 ppm is fatal within a few minutes (ATSDR 2010). Under US Occupational Safety and Health Administration permissible exposure limit standards, workers are never supposed to be exposed to concentrations exceeding 1 ppm (OSHA n.d.).

Though this metal recycling facility is not currently included in the RMP, the 2010 incident highlights the potential impact on nearby communities from chlorine releases from RMP facilities that use chlorine as a disinfectant for their industrial processes, such as drinking water plants, sewage treatment plants, and some food processing facilities. More than 844 million pounds of chlorine are used or stored in more than 2,300 RMP facilities, the second largest number of facilities by chemical (RTKNet n.d.a).

DEMOGRAPHICS OF THE SURROUNDING AREAS

The population of Tulare consists of 64 percent people of color, with the majority of them being of Latino descent (58 percent), and with a poverty rate that is 75 percent greater than the national rate (US Census Bureau n.d.b).

POTENTIAL HEALTH IMPACTS

A total of 23 persons, including employees, customers, and workers at nearby businesses, were treated at seven area hospitals for the effects of the fumes that included coughing, difficulty breathing, headache, and burning of the nose, throat, or lungs. Six people were hospitalized for treatment lasting 1 to 11 days, including at least one person who required mechanical ventilation for life support. In a follow-up news article published in *Scientific American* 16 months later, the workers interviewed reported they were still suffering with health effects, including lung and stomach problems and post-traumatic stress disorder (PTSD) (Kay 2011).

In a follow-up health assessment investigation by the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry (ATSDR), in conjunction with the California Department of Health, almost half of the 29 people identified as potentially exposed to the chlorine gas cloud were either customers or employees in businesses located across the street and downwind from the tank; the remainder were workers at the facility. Almost three-quarters of those exposed to the fumes were Latino (CDC 2011).

August 6, 2012: 15,000 Seek Medical Treatment Due to Chevron Refinery Incident

SUMMARY OF THE INCIDENT

On August 6, 2012, an oil refinery owned by Chevron U.S.A. in Richmond, California, suffered a ruptured pipe that resulted in a major fire at the refinery. The ruptured pipe released flammable, high-temperature light gas oil, which then

partially vaporized into a large, opaque cloud that engulfed 19 Chevron employees, all but one of whom escaped before it ignited into a fireball. One Chevron firefighter was engulfed in the flames but fortunately survived due to wearing full-body firefighting protective equipment, but six Chevron employees were injured (CSB 2015, pp. 1–2).

The resulting fire sent a plume of hydrocarbon vapors, particulate matter, and black smoke into the surrounding communities, eliciting a Community Warning System Level 3 alert (the highest alert level when the health of the general public located offsite is at risk) and a shelter-in-place advisory for the cities of Richmond, San Pablo, and North Richmond.

DEMOGRAPHICS OF THE SURROUNDING AREAS

The populations of Richmond and San Pablo are predominantly comprised of people of color—78 percent and 88 percent, respectively (US Census Bureau n.d.c)—with respective poverty rates 31 percent and 65 percent above the national rate (US Census Bureau n.d.d). More than 52,000 people live within three miles of the refinery, with 90 percent comprising people of color and almost one-half (48 percent) living in poverty (ECHO n.d.c).

POTENTIAL HEALTH IMPACTS

In the weeks following the incident, approximately 15,000 people from the surrounding communities sought treatment at nearby medical facilities for ailments including breathing problems, chest pain, shortness of breath, sore throat, and headaches. Approximately 20 of these people were admitted to local hospitals for inpatient treatment (CSB 2015, pp. 1–2). As of August 15, 2012, almost 24,000 claims were filed with Chevron for compensation due to medical and property expenses from the fire (Chevron 2012, p. 2).

Chevron estimated that flaring the escaping gas vapors from the ruptured pipe on the day of the event and following three days emitted almost 9,000 pounds of sulfur dioxide (SO₂); an estimated 2,000 additional pounds of SO₂ was released directly from the fire, as well as 1,700 pounds of methane, 3,800 pounds of non-methane hydrocarbons, 940 pounds of nitrogen dioxide, and 46 pounds of hydrogen sulfide (H₂S). While air quality monitoring data taken by Chevron employees and from fixed monitoring sites on the day of the fire and the following two days found no major increases in the levels of H₂S, SO₂, and carbon monoxide (Chevron 2012, pp. 3–5), no air quality monitoring data for particulate matter (i.e., soot), which is known to cause the type of breathing problems and chest pains reported by the medical patients (EPA n.d.), was included for the period of the fire and subsequent days in the documents submitted by Chevron to Contra Costa Health Services (CCHS).

Chevron did have 19 air quality samples from areas downwind of the fire in Richmond, El Sobrante, and El Cerrito analyzed for sulfur compounds and hydrocarbons by an industrial laboratory. An additional six air quality samples from Richmond from the two days following the fire were also sent by Chevron for analysis. Chevron reported to the CCHS that all analytic results were below California EPA Office of Environmental Health Hazard Assessment reference exposure levels and California Occupational Health and Safety Administration permissible exposure limits.

The California Bay Area Air Quality Management District (BAAQMD) analyzed eight samples of particulate matter obtained after the fire was out for elemental carbon, organic carbon, and other chemical components. While the laboratory analysis found particulate matter levels below federal and state standards, slightly elevated levels of elemental carbon (a marker for combustion) were found, providing evidence of potential smoke particles in the air after the fire was extinguished. Dr. Wendel Brunner, the CCHS’s director of public health, noted, “The particulate results are what we expected to see given that the monitoring began at midnight after the fire was out . . . These results, however, do not suggest there were not health impacts experienced by residents in the immediate area.” (BAAQMD 2012).

BAAQMD monitoring data for fine particulate matter less than 2.5 microns in diameter (PM_{2.5}) indicates a significant spike in PM_{2.5} levels at the Oakland West monitor at 7:00 a.m. the day after the fire, approximately eight hours after the shelter-in-place order was lifted (BAAQMD 2014). Since Chevron reported that the wind direction at the time of the incident was southeast, and Oakland is south-southeast of Richmond, and since PM_{2.5} levels at the same time of day on the morning before the fire shows no such increase for the same Oakland West monitoring station, it is possible that remnants of the fire plume affected even this area. However, two communities north of Richmond (Santa Rosa and Vallejo) also had a significant increase in PM_{2.5} levels within one to two hours after the Oakland West spike, so it is

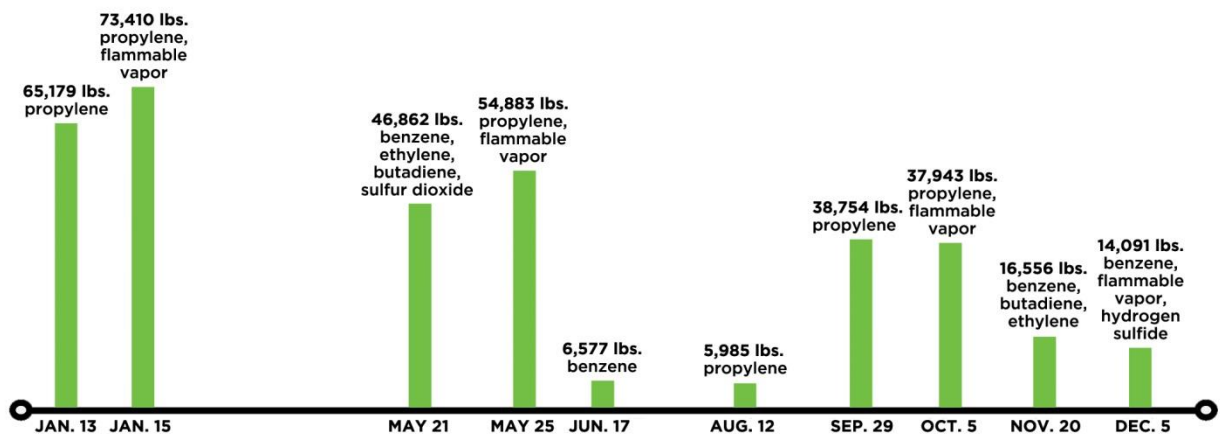
uncertain whether these PM_{2.5} increases can be attributed to the remnants of the fire plume or some other source for such a broad geographic area.

2013: ExxonMobil Refinery & Chemical Plant Report 76 Incidents in One Year

SUMMARY OF THE INCIDENTS

In 2013, ExxonMobil’s refinery and chemical plants, both located in the Baton Rouge, Louisiana, area, reported a combined total of 76 accidents to the Louisiana Department of Environmental Quality (LDEQ) that resulted in the release of almost half a million pounds of chemicals and pollutants into the air. The majority of this pollution was released from just 10 accidents (see the figure).

Major 2013 ExxonMobil Refinery and Chemical Plant Releases



In 2013 alone, ExxonMobil released more than 360,000 pounds of toxic substances from its Baton Rouge facilities, endangering the health and safety of facility workers and nearby residents.

Note: Pollution figures are from the ExxonMobil refinery and chemical plant facilities in Baton Rouge, Louisiana.

SOURCE: ADAPTED FROM LBB 2014A.

Despite these major air pollution releases, the ExxonMobil Chemical facility report filed in 2016 with the RMP, which covers the previous five-year period, states, “The ExxonMobil Baton Rouge Chemical Plant has an excellent record of accident prevention over the life of the plant. There have been no accidents during the past five years that are reportable under this regulation” (RTKNet n.d.b). The ExxonMobil Refinery accident section of its RMP summary report, last filed in June 2014, includes mention of only one event in 2010 in which a compressor released residual fuel gas and caught fire, injuring three workers. The company included this incident in the current RMP database as one of four “accidents” included with three other more recent incidents that injured a total of five workers (RTKNet n.d.c). None of ExxonMobil’s 40 chemical facility incidents or 36 refinery incidents reported to the LDEQ in 2013 are included in its RMP reports, highlighting the challenges communities face on a regular basis in understanding the scope of toxic pollution releases.

DEMOGRAPHICS OF THE SURROUNDING AREAS

Almost 4,000 people live within one mile of the ExxonMobil refinery (the nation's fourth-largest refinery) and the nearby chemical plant (ECHO n.d.d).

Ninety-six percent of the people living within one mile of these facilities are African American (ECHO n.d.c), with more than one-half (56 percent) living in poverty. This poverty rate is almost three times the poverty rate for all of East Baton Rouge Parish (20 percent), more than twice that of the City of Baton Rouge (26 percent), and more than four times the national poverty rate (US Census Bureau n.d.e).

POTENTIAL HEALTH IMPACTS

The chemicals released from the two ExxonMobil facilities can cause significant health problems for people exposed to them. The table lists the pollutants most commonly released by ExxonMobil's Baton Rouge plants in 2013.

Top Pollutants Released at ExxonMobil's Baton Rouge Facilities in 2013

Pollutant	Pounds Released	Health Effects
Sulfur Dioxide	204,683	Impairs lung function, triggers asthma
Propylene	111,472	Causes unconsciousness in large doses
Flammable Vapor	105,672	Irritates skin, eyes, nose, throat; can cause burns if it combusts
Ethylene	17,538	Causes unconsciousness in large doses
Nitrogen Oxide	14,175	Irritates eyes, nose, throat, and lungs
Volatile Organic Compounds	12,884	Irritates eyes, nose and throat; damages liver, kidneys, and nervous system
Benzene	8,640	Causes drowsiness, rapid heart rate, headaches, cancer

SOURCE: ADAPTED FROM LBB 2014A.

June 2014: More than 400 Health Complaints Due to Shell Chemical/International Matex Tank Terminals Incident

SUMMARY OF THE INCIDENT

Louisiana's St. Rose community is on the east bank of the Mississippi River, two miles north of the Jefferson Parish border, and is part of the Greater New Orleans metropolitan area. It includes the International Matex Tank Terminals (IMTT) facility and a Shell Chemical asphalt refinery. The IMTT is a bulk storage facility for petrochemical products, vegetable oils, and alcohols; Shell refines crude oil into asphalt. Though the two facilities are owned and operated by different companies, material regularly moves between the two (crude oil is initially stored in the IMTT's tanks, then moves to Shell for processing, and is returned to the IMTT's tanks as asphalt) (LBB 2014b).

In early June 2014, Shell and the IMTT received a shipment of crude oil with a high sulfur content, which resulted in producing more H₂S when it was refined at Shell Chemical. The facility's pollution control equipment was

overloaded by pollutants and malfunctioned, resulting in high amounts of H₂S and other pollutants emitted directly into the surrounding community (Bacon-Blood 2014).

DEMOGRAPHICS OF THE SURROUNDING AREAS

Just over one-half (53 percent) of the greater St. Rose community consists of people of color, but the poverty rate is 38 percent higher than the national rate (US Census Bureau n.d.f). People of color make up 63 percent of the almost 2,700 people living within a one-mile zone surrounding these facilities, with almost half living in poverty (ECHO n.d.e).

POTENTIAL HEALTH IMPACTS

In order to avoid substantial complaints about odor annoyance among the exposed population, the World Health Organization recommends that H₂S concentrations should not exceed 5 ppb over a 30-minute average time period (WHO Regional Office for Europe 2000). St. Rose community members living in close proximity to the Shell Chemical/IMTT facilities filed more than 140 reports of strong odors and illness in the first week after the high-sulfur crude was refined, and subsequent complaints over the next several months totaled more than 400, with monitored H₂S levels ranging up to 5 ppb during the first week of exposure and up to 2 ppb as long as six months later (LBB 2014b).

H₂S has a strong “rotten egg” odor that is detectable by humans at very low levels. The ATSDR has set an intermediate-duration (two weeks to one year) inhalation “minimum risk level” at 20 parts per billion (ppb), though neurological and respiratory effects can also be felt at lower H₂S exposure levels. Reported neurological effects include loss of coordination, poor memory, hallucinations, personality changes, and anosmia (loss of sense of smell); respiratory effects include nasal symptoms, sore throat, cough, and difficulty breathing. Impaired lung function has also been observed in asthmatics acutely exposed to H₂S in concentrations as low as 2 ppb (ATSDR 2016).

Conclusion

In addition to the direct, acute health effects of the toxic chemicals released at these and other facilities, there are other lesser-studied but real, potential health impacts—such as the psychological impacts (e.g., fear, depression) of living near facilities where incidents have been known to occur. For example, a follow-up study of community health impacts from the 2005 BP Texas City refinery explosion—which killed 15 workers, injured approximately 170 others, and released approximately 2,500 pounds of benzene and 30,000 pounds of other potentially dangerous air pollutants during a four-week period after the blast—found significant declines in both perceived mental and physical health, and concluded that “even a modest event within the range of accidents and disasters was shown to be associated with negative [perceived mental and physical] health outcomes for a population-based sample” (Peek et al. 2008).

These findings underscore an important need to investigate the longer-term health impacts from chemical facility incidents. Further, there is an urgent need to assess the long-term health consequences from the regular release of toxic chemicals into surrounding communities from incidents that occur frequently but do not meet the technical thresholds for reporting to the RMP—exemplified by the 2013 releases from the ExxonMobil facilities in Baton Rouge.

Despite the EPA’s acknowledgment over the past several years that chemical facility incidents occur frequently and can affect nearby local communities as well as facility employees themselves, the EPA’s 2018 proposed rule and supporting documentation essentially ignores these findings, as it does not attempt to assess or quantify the varied health impacts associated with exposure from toxic chemicals released into local communities. The 2018 proposed rule not only increases that likelihood that incidents will occur by removing essentially all preventive measures, but it also increases the impact on communities when these incidents happen. That is because key provisions of the 2017 rule that increase information for first responders, fenceline communities, and the broader public are eliminated along with the move toward safer technologies and practices.

As this small set of examples shows, the impacts of these incidents are severe, including death and serious injury, while disproportionately affecting communities of color, children and families that have the fewest resources to protect

themselves. Leaving these Americans without greater protection from major industrial incidents is unconscionable. The impacts of these incidents are not inconveniences; they are life-threatening.

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