MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Grievance Submittal Form

Nondiscrimination in Michigan Department of Environment, Great Lakes, and Energy (EGLE) Programs

Policy and Procedure Number 09-024

SECTION I. COMPLAINANT INFORMATION

FIRST NAME: Nicholas

LAST NAME: Leonard

EMAIL ADDRESS: nicholas.leonard@glelc.org

TELEPHONE NUMBER: 313-782-3372

MAILING ADDRESS: 4444 Second Avenue

CITY: Detroit

STATE: MI

ZIP: 48201

SECTION II. INCIDENT INFORMATION

DATE OF INCIDENT: 01/29/2020

DATE OF GRIEVANCE SUBMISSION: 07/27/202

LOCATION OF INCIDENT (Include street crossing, street number, Street, City, State, ZIP)

6520 Georgia Street, Detroit, MI 48201

Please identify the parties harmed or potentially harmed by the alleged discrimination. Use additional pages if necessary.

See Attachment

List the state and/or federal statute(s) or regulation(s) that EGLE allegedly violated and detail with specificity the action(s) or inaction(s) by EGLE that support the alleged violation. Use additional pages if necessary.

See Attachment

Describe with specificity the action(s) or inaction(s) allegedly resulted in discrimination. Use additional pages if necessary.

See Attachment

SECTION III. CERTIFICATION

I certify under penalty of law that I am familiar with the information submitted and that, based on my experience and inquiry, I believe the submitted information is true, accurate, and complete.

Nicholas Leonard

Signature

07/27/2020

Date

Nicholas Leonard

Print Name

Submit this form with any additional pages to:

Nondiscrimination Compliance Coordinator
Executive Office
Michigan Department of Environment, Great Lakes, and Energy
P.O. Box 30473
Lansing, MI 48909-7973

or by email to:

EGLE-NondiscriminationCC@Michigan.gov

By electronic mail

July 27, 2020

Attn: Nondiscrimination Compliance Coordinator
Executive Office
Michigan Department of Environment, Great Lakes, and Energy
525 West Allegan
P.O. Box 30473
Lansing, MI 48909-7973
EGLE-NondiscriminationCC@Michigan.gov

Regina Strong
Office of the Environmental Justice Public Advocate
Michigan Department of Environment, Great Lakes, and Energy
525 West Allegan
P.O. Box 30473
Lansing, MI 48909-7973
StrongR1@Michigan.gov

Al Taylor
Hazardous Waste Section
Materials Management Division
Michigan Department of Environment, Great Lakes, and Energy
525 West Allegan
P.O. Box 30241
Lansing, MI 48909-7741
taylora@michigan.gov

Liesl Clark
Director
Michigan Department of Environment, Great Lakes, and Energy
525 West Allegan
P.O. Box 30473
Lansing, MI 48909
clarkl20@michigan.gov

Re: <u>Title VI Complaint Under Michigan Department of Environment, Great Lakes, and Energy Policy and Procedure 09-024</u>

On behalf of the residents of Detroit, Hamtramck, and the state of Michigan, as well as the named individuals and organizations provided in Section II ("Complainants") the Great Lakes Environmental Law Center is submitting this Complaint regarding the Michigan Department of Environment, Great Lakes, and Energy's pattern of neglect and disregard for communities of color in regards to the licensing of commercial hazardous waste facilities that has resulted in these facilities being disproportionately located in communities of color.

On January 29, 2020, the Michigan Department of Environment, Great Lakes, and Energy approved a license modification for U.S. Ecology North that will allow the facility to increase its storage capacity nine-fold. It did this despite the fact that the facility is located in a densely populated low-income community of color that already includes another commercial hazardous waste facility just to the south as well as a number of other industrial sites that have caused nearby residents physical and mental harm. In doing so, EGLE is continuing a history of discriminatory practices that has plagued this neighborhood since the 1940's.

The Michigan Department of Environment, Great Lakes, and Energy's decision to allow U.S. Ecology North to significantly expand its operations is part of a larger pattern of neglect and disregard for low-income communities of color regarding commercial hazardous waste facilities. In Michigan, the disproportionate siting of commercial hazardous waste facilities in communities of color has been found the worst in the nation. Today, that pattern continues unabated. 65% of the people living within 3 miles of a commercial hazardous waste facility in Michigan are people of color despite being only 25% of Michigan's total population. To make matters worse, commercial hazardous waste facilities hardly serve their own communities. In 2017, 70% of the waste sent to all commercial hazardous waste facility came from out of state, 25% came from another county within Michigan, and only 5% came from the county in which the commercial hazardous waste facility is located.

To put it simply, Michigan's low-income communities of color are disproportionately bearing the burden of living near large commercial hazardous waste facilities. These facilities serve as the dumping ground for hazardous waste that comes from all over the country. The Complainants submit this Complaint and request that the Michigan Department of Environment, Great Lakes, and Energy conduct a thorough investigation of the issues raised herein.

I. Introduction

Since springing into the national consciousness in the 1980s, the environmental justice movement has compelled federal, state, and local governments to examine how environmental laws and regulations may result in communities of color bearing a disproportionate burden regarding environmental risks. The start of the environmental justice movement is often pinpointed at 1982 in Warren County, North Carolina, where residents protested North Carolina's decision to locate a hazardous waste landfill in a predominantly Black and low-income community. However, the roots of the environmental justice movement stretch back to the civil rights struggles of the 1960s, including Martin Luther King Jr. supporting Black garbage workers in their strike for equal pay and better working conditions. It is from the civil rights struggle that the environmental justice movement drew its core principles. One of these core principles of environmental justice was concisely described by Dr. King himself:

> When the Constitution was written, a strange formula to determine taxes and representation declared that the Negro was sixty percent of a person. Today another curious formula seems to declare he is fifty percent of a person. Of the good things in life, the Negro has approximately one half those of whites. Of the bad things of life, he has twice those of whites.[1]

At the heart of the environmental justice movement is rectifying the inequitable distribution of burdens and benefits that Martin Luther King decried. As a concept, environmental justice has been defined in many ways by government agencies and community activists. The United States Environmental Protection Agency has defined environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, or national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[2] The concept of "fair treatment" in the context of the development, implementation, and enforcement of environmental laws means that "no group of people, including racial, ethnic, or socio-economic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, or commercial operations or the execution of federal, state, local and tribal programs and policies."[3]

While today's laws no longer expressly codify racial segregation and unequal treatment, the legacy of racism continues to this day. As noted by environmental justice scholar and activist Dr. Robert Bullard:

> The laws that codify racial segregation have been eradicated but the practices continue today, which is why you get refineries, chemical plants and landfills disproportionately in

[1] Rev. Martin Luther King Jr., The Southern Christian Leadership Conference Presidential Address, Aug. 16, 1967.
[2] U.S. Environmental Protection Agency, Environmental Justice, available at https://www.epa.gov/environmentaljustice
[3] Robert Bullard, Paul Mohai, Robin Saha, and Beverly Wright, *Toxic Wastes and Race at Twenty 1987-2007: A Report Prepared for the United Church of Christ Justice & Witness Ministries*, March 2007 (Appendix A).

> communities of color…The only way to reverse that is to change the idea that communities of color are dumping grounds for pollution.[4]

One of the primary environmental burdens that has historically been borne by Black communities is living near commercial hazardous waste storage, treatment, and disposal facilities. Such commercial facilities accept wide varieties of hazardous waste from far-reaching locations. These wastes are often the toxic byproducts of a wide variety of industrial processes, as well as contaminated soil or water extracted from contaminated sites from across the country. After the birth of the environmental justice movement in Warren County in 1987, the United Church of Christ analyzed the relationship between race and the location of commercial hazardous waste facilities. As described in more detail below, the study concluded that commercial hazardous waste facilities were disproportionately sited in Black communities nationwide. In its follow up report 20 years later, the United Church of Christ found that the trend of disproportionately siting commercial hazardous waste facilities in communities of color had continued unabated.

This problem is particularly egregious in Michigan. As noted by the United Church of Christ's 2007 study, the percentage of people of color living nearby commercial hazardous waste facilities is 66%, whereas the percentage of people of color living in all other areas of the state is 19%. This disproportionality was found to be the most severe in the entire country. This problem remained unaddressed. Today, 65% of the peoples living within 3 miles of a commercial hazardous waste facility are people of color, despite being only 25% of Michigan's total population.

The decision by the Michigan Department of Environment, Great Lakes, and Energy ("EGLE") to allow U.S. Ecology to significantly expand the capacity of its hazardous waste storage and treatment facility continues the discriminatory legacy of requiring communities of color to bear the disproportionate burden of living in communities that are dumping grounds for hazardous waste. Unfortunately, U.S. Ecology North ("Facility") does not exist in isolation. Throughout Michigan, commercial hazardous waste facilities are overwhelmingly located in low-income communities of color.

During the U.S. Ecology licensing process, community members repeatedly brought up their concerns regarding the disproportionate siting of commercial hazardous waste facilities in low-income communities of color. EGLE never responded to these concerns. Instead, it simply stated that EGLE "does not have the authority to consider whether the facility is needed or wanted when deciding whether to issue or deny a license."[5] EGLE has a legal obligation, pursuant to the EPA's Title VI regulations, to ensure that its licensing decisions do not have a discriminatory effect. Instead of closely examining the proposed license to ensure that it would not have an unjustified adverse disparate impact on the surrounding community, EGLE continued its disappointing legacy of shirking its Title VI obligations to communities of color which

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[4] Oliver Milman, *Robert Bullard: 'Environmental justice isn't just slang, it's real,'* THE GUARDIAN, December 20, 2018, https://www.theguardian.com/commentisfree/2018/dec/20/robert-bullard-interview-environmental-justice-civil-rights-movement (last visited Jul 23, 2020).

[5] Michigan Department of Environment, Great Lakes, and Energy, Responsiveness Summary, Proposed Hazardous Waste Management Facility Operating License, Jan. 29, 2020 (Appendix B)

perpetuates the environmental injustice of commercial hazardous waste facilities in Michigan being disproportionately located in communities of color.

Now, the Complainants are submitting this Complaint for relief under EGLE Policy and Procedure 09-024, Nondiscrimination in EGLE Programs regarding EGLE's decision to issue an amended license to U.S. Ecology North on January 29, 2020, permitting the significant expansion of its hazardous waste storage capacity.[6] Pursuant to EGLE Policy and Procedure 09-024, any person or group may submit a complaint alleging discrimination of any kind by EGLE, including discrimination by EGLE that may constitute a violation of 40 C.F.R. Part 7 or any state or federal statutes or regulations that EGLE enforces.[7] Here, the Complainants allege that EGLE's decision to issue the amended license to U.S. Ecology North is in violation of Title VI of the Civil Rights Act of 1964 and the EPA's Title VI regulations described in 40 C.F.R. Part 7. Specifically, the Complainants allege as follows:

- EGLE discriminated on the basis of national origin by failing to identify limited English proficient persons living nearby U.S. Ecology North and by failing to provide adequate translation and interpretation services at its community meeting held on March 28, 2019 in violation of 40 C.F.R. Part 7.
- EGLE' s decision to approve the license modification regarding the U.S. Ecology North, which permits a significant expansion of the Facility's hazardous waste storage capacity, violates 40 C.F.R. Part 7.
- EGLE's failure to adopt policies or regulations requiring the consideration of racial and economic demographic information in hazardous waste licensing decisions has established a pattern or practice of discrimination on the basis of race, color, and national origin in violation of 40 C.F.R. Part 7 and 42 U.S.C. § 2000d.

II. Complainants

Complainant Michigan Environmental Justice Coalition ("MEJC") is a statewide coalition of individuals, organizations, and academic institutions. MEJC works to achieve a clean, healthy, and safe environment for Michigan's most vulnerable residents in alignment with the principles of environmental justice that were drafted and adopted by the delegates to the First National People of Color Environmental Leadership Summit held on October 24-27, 1991.[8]

Complainant Sierra Club is the nation's largest non-profit, grassroots environmental organization with more than 60 chapters throughout the country. Sierra Club's purpose is to protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments. Sierra Club's Michigan Chapter has been active in furthering environmental justice throughout the state.

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[6] EGLE Policy and Procedure 09-024, Nondiscrimination in EGLE Programs, Last revised Jan. 21, 2020 (Appendix C).
[7] Id.
[8] Principles of Environmental Justice, First National People of Color Environmental Leadership Summit, Last modified Apr. 6, 1996, available at https://www.ejnet.org/ej/principles.html

Complainant Pamela McWilliams is a resident of Detroit, Michigan. Her primary residence is immediately to the south of U.S. Ecology North. She is concerned about the operation of U.S. Ecology North as well as EGLE's decision to approve an amended license for the Facility to allow it to significantly expand its hazardous waste storage capacity. Specifically, she is concerned that the expansion of U.S. Ecology North's operations will result in increased adverse impacts for nearby residents.

Complainant Irene Sinclar is a resident of Detroit, Michigan. Her primary residence is immediately to the south of U.S. Ecology North. She is concerned about the operation of U.S. Ecology North as well as EGLE's decision to approve an amended license for the Facility to allow it to significantly expand its hazardous waste storage capacity. Specifically, she is concerned that the expansion of U.S. Ecology North's operations will result in increased adverse impacts for nearby residents.

Complainant Kheir Arabi is a resident of Detroit, Michigan. His primary residence is immediately to the west of U.S. Ecology North. He is concerned about the operation of U.S. Ecology North as well as EGLE's decision to approve an amended license for the Facility to allow it to significantly expand its hazardous waste storage capacity. Specifically, he is concerned that the expansion of U.S. Ecology North's operations will result in increased adverse impacts for nearby residents. He is also concerned about EGLE's failure to identify limited English proficient persons living nearby U.S. Ecology North, as well as its failure to provide adequate translation and interpretation services.

Complainant Mark Covington is a resident of Detroit, Michigan. His primary residence is immediately to the east of U.S. Ecology North. He is concerned about the operation of U.S. Ecology North as well as EGLE's decision to approve an amended license for the Facility to allow it to significantly expand its hazardous waste storage capacity. Specifically, he is concerned that the expansion of U.S. Ecology North's operations will result in increased adverse impacts for nearby residents.

Complainant Sharon Buttry is a resident of Hamtramck, Michigan, and is an active participant in the Coalition to Oppose the Expansion of U.S. Ecology. She is concerned about the operation of U.S. Ecology North as well as EGLE's decision to approve an amended license for the Facility to allow it to significantly expand its hazardous waste storage capacity. Specifically, she is concerned that the expansion of U.S. Ecology North's operations will result in increased adverse impacts for nearby residents.

III. Factual Background

To understand how commercial hazardous waste facilities in Michigan have come to be so disproportionately located in low-income communities of color, it is necessary to examine the history of race and housing in places such as Detroit, as well as the history of the environmental justice movement.

A. History of Race and Housing in Detroit

From 1910 to 1970, Detroit's Black population increased from 5,741 to 660,428.[9] The most rapid increase came in the 1940s when Detroit saw its Black population double from roughly 150,000 residents to 300,000 residents.[10] This influx of Black residents was part of the Great Migration, which saw six million Black southerners leave their homes in search of better lives away from the Jim Crow South in the rapidly industrializing North. The rapid increase in the number of Black residents from the South led observers to call Detroit "the northernmost southern city" or "the largest southern city in the United States."[11] With the influx of Black residents came a rise in racism, which was clearly exhibited in the growing practice of race-based residential segregation throughout Detroit.

Throughout much of the early and mid-20th century, racial covenants restricting the sale of property to Black residents was a commonly used tool to maintain housing segregation in a rapidly changing Detroit. Upon arrival in the 1940s, most Black residents were forced into overcrowded neighborhoods such as "Paradise Valley" and "Black Bottom" on Detroit's near-eastside. In addition to these neighborhoods, Black enclaves were also established in pockets of Detroit, including a Black enclave nearby the current U.S. Ecology North facility on the border of Hamtramck. Notably, Black neighborhoods throughout Detroit were consistently redlined for mortgages in the 1940s. This policy of redlining Black neighborhoods was officially and expressly approved by federal housing policy.

The primary sources used by lenders to determine eligibility for mortgages and home loans were Security Maps and Surveys developed by Federal Home Loan Bank Board officials.[12] These maps, such as the one provided in Figure 1 below, subdivided Detroit into four sections. The factors most important to determining a neighborhood's classification was the level of racial homogeneity, and the absence of a "lower grade population."[13] Neighborhoods with even a relatively small Black population, such as the neighborhood nearby the U.S. Ecology North facility, were given a "D" rating. Additionally, areas that were perceived as "shifting" or were experiencing "infiltration" by "an undesirable population" were given a "D" rating.[14] An area's classification had severe consequences. Residents in areas rates "C" or "D" were very unlikely to qualify for mortgages, and builders and developers were unlikely to receive financial backing for developments in such neighborhoods.[15] In short, federal housing policy legitimized and backed systemic discrimination against Blacks in housing in Detroit and throughout the country.[16]

As a result of the widespread use of restrictive, race-based covenants in real estate transactions and redlining, a rapidly increasing influx of Black residents were trapped in densely packed neighborhoods with deteriorated housing at inflated prices. By 1947, of the 545,000 housing units available in Detroit, only 47,000 were available to Blacks.[17] Unable to move to newly

[9] U.S. Department of Commerce, Bureau of the Census, *United States Census of Population,* 1910-1970 (Washington, D.C.: U.S. Government Printing Office, various years).
[10] Id.
[11] Thomas J. Sugrue, The Origins of the Urban Crisis: Race and Inequality in Postwar Detroit, at 23, Princeton University Press (1996) (hereinafter, "Sugrue")
[12] Sugrue at 43.
[13] Id. at 43-44.
[14] Id. at 44.
[15] Id.
[16] Id.
[17] Id.

developed housing units and unable to obtain financing for home improvements, Black neighborhoods and enclaves throughout Detroit became overcrowded and physically deteriorated. Black residents converted all types of buildings into housing for the increasing numbers of new residents. In 1943, eighteen Black families lived in a former church that had been converted into an apartment building.[18] In 1946, Lester Velie described housing discrimination as "Detroit's Time Bomb."[19]

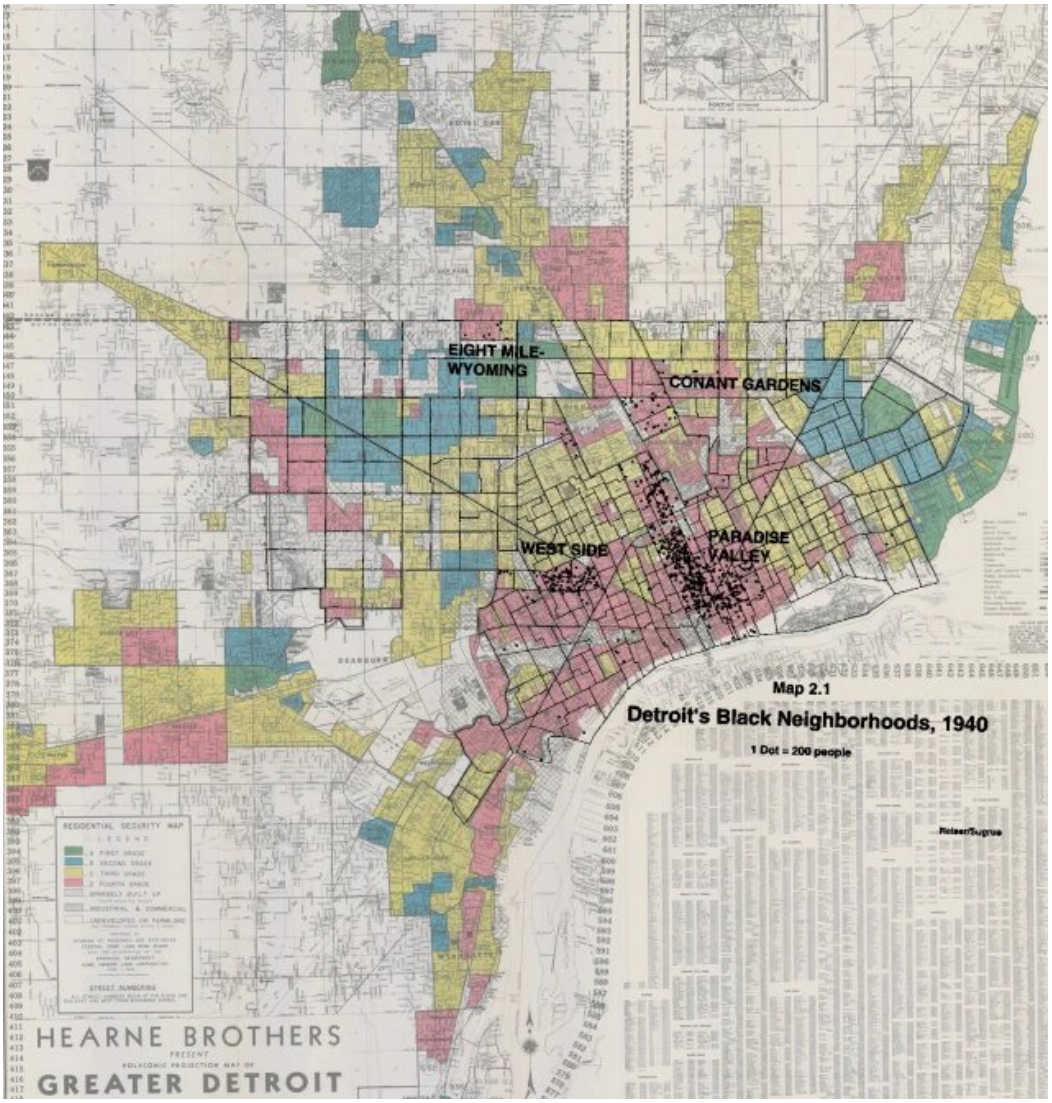

Figure 1 - Residential Security Map Prepared by the Federal Home Loan Bank Board (1939) Superimposed by 1940 Mapped Locations of Detroit's Black Neighborhoods.

[18] Id. at 42.
[19] Lester Velie, Housing: Detroit's Time Bomb: Racial Rivalry is the dynamite that makes it dangerous, Collier's Weekly, Nov. 23, 1946, pp. 14-15.

The overcrowding and deterioration of Detroit's Black neighborhoods lead to municipal plans for "slum clearance." While there have been various methods of slum clearance, one such method was targeting Black neighborhoods for industrial development. As Detroit was experiencing a large increase in its Black population, its City Planning Commission was developing its "industrial renewal" policy to revitalize the City's industrial base.[20] To attract industrial developers, in 1951, the City established industrial corridors in its Master Plan and proposed to the condemnation and demolition of substandard residential structures that have a blighting effect in industrial districts.[21] As demonstrated by Figure 2 below, the industrial corridors proposed in Detroit's 1951 Master Plan coincided very closely with Detroit's Black neighborhoods show in in Figure 1, which had been redlined for new residential developments and mortgages due in large part to federal housing policy.

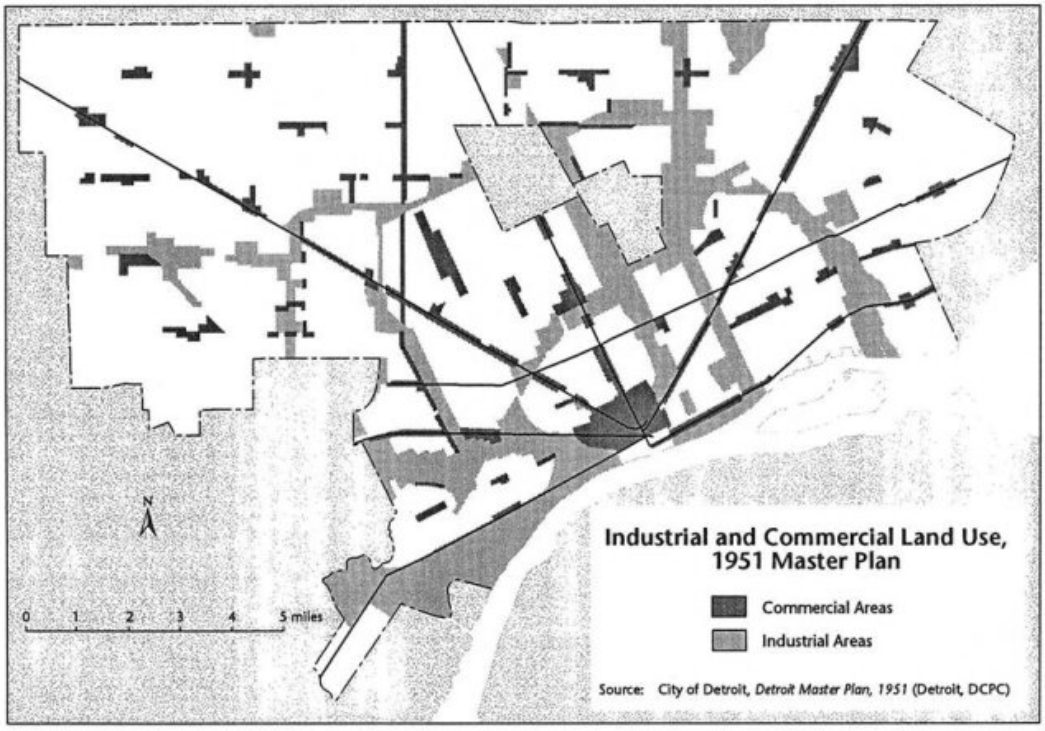

Figure 2 - Map from City of Detroit's 1951 Master Plan Proposing Industrial and Commercial Areas.[22]

B. History of Environmental Justice

The widespread practice of racial housing discrimination throughout much of the 20th century ensured that people of color were purposefully restricted from moving to predominantly white neighborhoods and trapped in deteriorating and overcrowded neighborhoods. To make things worse, the Detroit government engaged in slum clearance efforts, which targeted Black communities for condemnation and demolition to make room for industrial developments. This

[20] Sugrue at 164.
[21] Id.
[22] City of Detroit, *City of Detroit Master Plan 1951, Industrial and Commercial Land use* (1951).

long-standing practice of housing discrimination and siting industrial developments near communities of color eventually led to the rise of the environmental justice movement.

The story of the environmental justice movement often starts in North Carolina when the Governor decided to landfill more than 30,000 gallons of PCB-contaminated soil in Warren County. North Carolina's decision to foist this environmental burden on this community was no accident. Warren County contained the highest percentage of Black residents in North Carolina and was also the poorest county in the state.[23] While Blacks composed only 24% of the state's population, they were 63% of the population of Warren County.[24] The per capita income for Warren County residents was approximately $7,000 in 1982, compared to $9,200 for the state. Warren County ranked 92nd out of 100 counties in median household income in 1980.[25] To put it bluntly, residents in Warren County in 1982 were predominantly Black and low-income.

The Governor's decision to locate a PCB landfill in a predominantly Black and low-income community galvanized what is held by many to be the United States' first national environmental justice protest. Local residents were joined by national civil rights leaders, including Reverend Leon White of the United Church of Christ's Commission for Racial Justice, Reverends Joseph Lowery, Ben Chavis, and Fred Taylor of the Southern Christian Leadership Conference, and District of Columbia Delegate Walter Fauntroy of the Congressional Black Caucus.[26] When the state attempted to start dumping PCB waste at the landfill, hundreds of protestors laid in the road to block the trucks. As a result, more than 55 protestors were arrested.[27] All told, more than 414 protestors were arrested over the course of several days of protests.[28]

The decision by North Carolina to site a hazardous waste landfill in a Black community was indicative of a broader, national problem. Dr. Charles Cobb, the director of the United Church of Christ's Commission on Racial Justice, gave voice to these concerns:

> We must move in a swift and determined manner to stop yet another breach of civil rights. We cannot allow this national trend to continue. If it means that every jail in this country must be filled, then I say let it be. The depositing of toxic wastes within the black community is no less than attempted genocide.[29]

The protests soon galvanized multiple reports that demonstrated the truth behind the concern that hazardous waste facilities were being disproportionately sited in communities of color. In 1982, Walter E. Fauntroy requested that the United States General Accounting Office (GAO) determine the correlation between the location of hazardous waste landfills and the racial and

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[23] Robert Bullard. Dumping in Dixie: Race, Class, and Environmental Quality, http://www.ciesin.org/docs/010-278/010-278chpt2.html (last visited Jul 23, 2020).
[24] Id.
[25] Id.
[26] Id.
[27] Special to the New York Times, *55 Arrested in Protest at a Toxic Dump in Carolina*, THE NEW YORK TIMES, September 16, 1982, https://www.nytimes.com/1982/09/16/us/55-arrested-in-protest-at-a-toxic-dump-in-carolina.html (last visited Jul 23, 2020).
[28] Robert Bullard. Dumping in Dixie: Race, Class, and Environmental Quality, http://www.ciesin.org/docs/010-278/010-278chpt2.html (last visited Jul 23, 2020).
[29] Urban Environment Conference, Inc., Taking Back Our Health: An Institute on Surviving the Toxic Treat to Minority Communities (Washington, D.C.: Urban Environment Conference, Inc., 1985)

economic status of the surrounding communities.[30] This investigation focused on offsite hazardous waste landfills that are not a part of or contiguous to any industrial facility located in the Southeast EPA Region IV. The report found that the three of the four offsite hazardous waste landfills located in the Southeast were located in communities that were composed of over 50% Black residents and that at least 26% of the population in each community had an income below the federal poverty level.[31]

C. United Church of Christ Report – Toxic Waste and Race

In addition to the GAO report which analyzed the racial and economic demographics of the communities surrounding offsite hazardous waste landfills in the Southeast, in 1987 the United Church of Christ's Commission for Racial Justice conducted a national survey of commercial hazardous waste facilities and the racial and economic demographics of the communities surrounding such facilities.[32] This report concluded that:[33]

- Race proved to be the most significant among variables tested in association with the location of a commercial hazardous waste facility.
- Communities with the greatest number of commercial hazardous waste facilities also had the highest composition of people of color. Specifically, in communities with two or more commercial hazardous waste facilities, the average percentage of people of color of the population was more than three times that of communities without any such facilities.
- Communities with a single commercial hazardous waste facility have an average percentage of people of color that is twice that of communities without any such facilities.
- While socioeconomics is an important factor in the location of a commercial hazardous waste facility, race proved to be the predominant factor.
- Incomes and home families were substantially lower when communities with commercial hazardous waste facilities were compared to those without such facilities.

The protests in Warren County served as a galvanizing moment, forever entwining the environmental and civil rights movements to form the environmental justice movement. While many advancements in environmental justice have been made, little progress has been made to address the disproportionate siting of commercial hazardous waste facilities in communities of color.

In 2007, the United Church of Christ surveyed the racial composition of communities living near commercial hazardous waste facilities 20 years after its original and groundbreaking study. The study's findings found that the trends identified in the 1987 report had continued unabated, as illustrated by Figure 3 below:

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[30] United States General Accounting Office. *Siting of hazardous waste landfills and their correlation with racial and economic status of surrounding communities*. (1983) (Appendix D).
[31] Id.
[32] United Church of Christ. *Toxic Wastes and Race in the United States*, (1987), available at https://www.nrc.gov/docs/ML1310/ML13109A339.pdf
[33] Id.

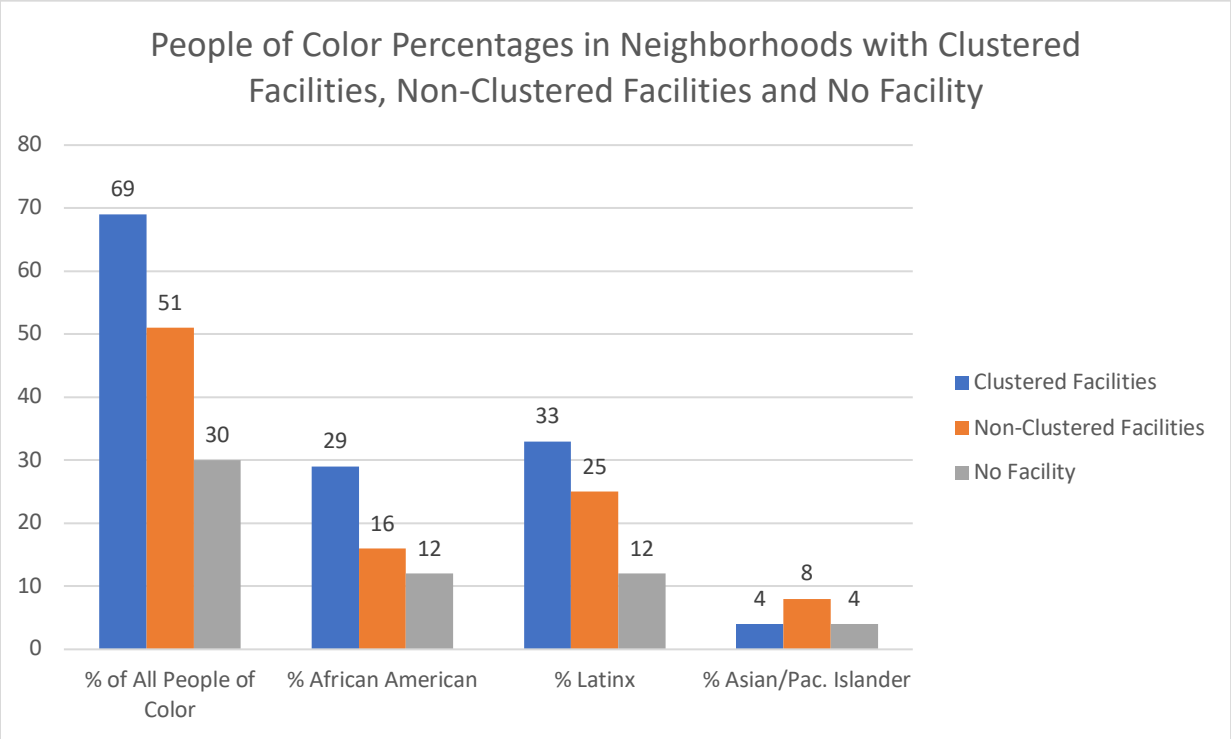

Figure 3 - Chart Comparing Percentages of People of Color in Neighborhoods with Clustered Facilities, Non-Clustered Facilities, and No Facilities.[34]

The disproportionate location of commercial hazardous waste facilities in communities of color is a national problem. Of the 44 states that have a licensed and operating commercial hazardous waste facility 40 have disproportionately high percentages of people of color living in communities with a commercial hazardous waste facility (commonly referred to as a "host community").[35] In Michigan, the problem is particularly acute. As illustrated by Figure 4 below, the 2007 United Church of Christ report found that Michigan had the largest difference in the country between the percentage of people of color in host communities compared to non-host communities:

[34] Robert Bullard, Paul Mohai, Robin Saha, and Beverly Wright, *Toxic Wastes and Race at Twenty 1987-2007: A Report Prepared for the United Church of Christ Justice & Witness Ministries*, March 2007 (Appendix A)
[35] Id.

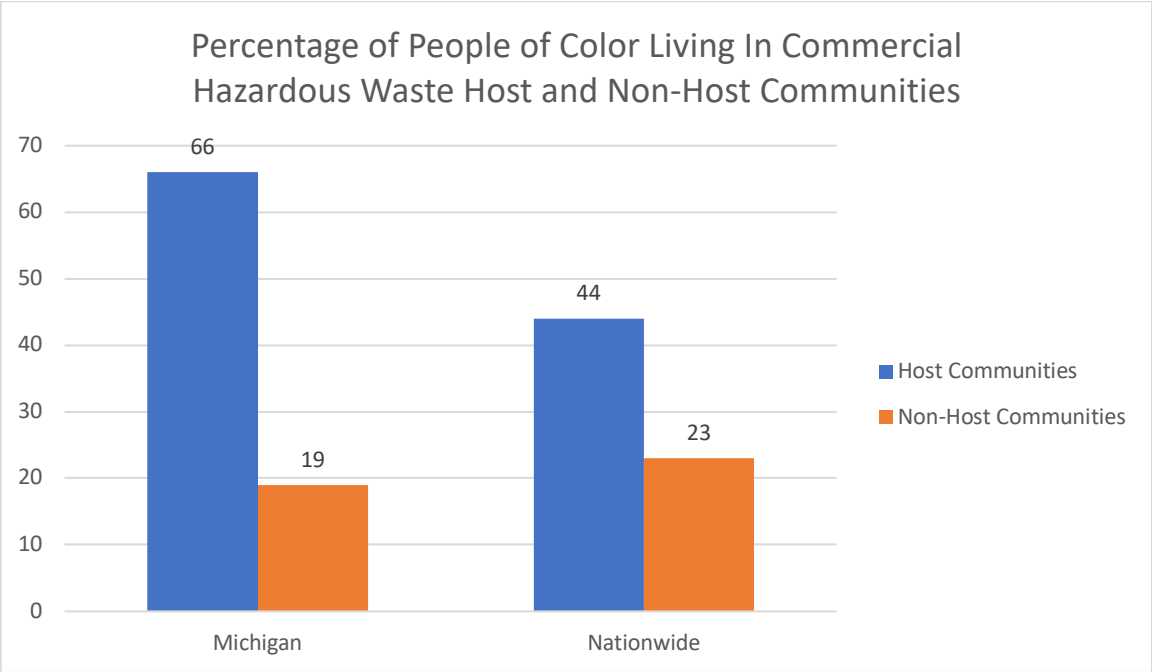

Figure 4 - Chart Comparing Percentage of People of Color Living in Commercial Hazardous Waste Host Communities with Percentages in Non-Host Communities in Both Michigan and Nationwide.[36]

In summary, more than 20 years after the birth of environmental justice, significant racial disparities in the distribution of commercial hazardous waste facilities persist throughout the country.[37] Nowhere is this more true than Michigan, where the racial disparity regarding the location of commercial hazardous waste facilities is at its most severe.[38]

D. U.S. Ecology North Hazardous Waste Facility

As discussed above, the neighborhood surrounding the U.S. Ecology North facility was one of Detroit's first Black enclaves in the 1940s. Despite the pervasiveness of housing discrimination and "slum clearance" efforts that sought to transform the neighborhood into an industrial corridor, to this day, it remains a vibrant and diverse community. It includes people such as Complainant Ms. McWilliams has lived in her home to the south of U.S. Ecology North for 33 years and who loves her neighborhood but is genuinely concerned about pollution from nearby industrial sites. It also includes people like Complainant Mr. Arabi, who lives to the west of U.S. Ecology North in the predominantly Yemeni-American community.

[36] Id.
[37] Id.
[38] Id.

i. Demographics of the Surrounding Community

The communities that exist within a 3-mile radius of the Facility, while diverse, are disproportionately people of color and low-income as demonstrated by Figure 5 below:[39]

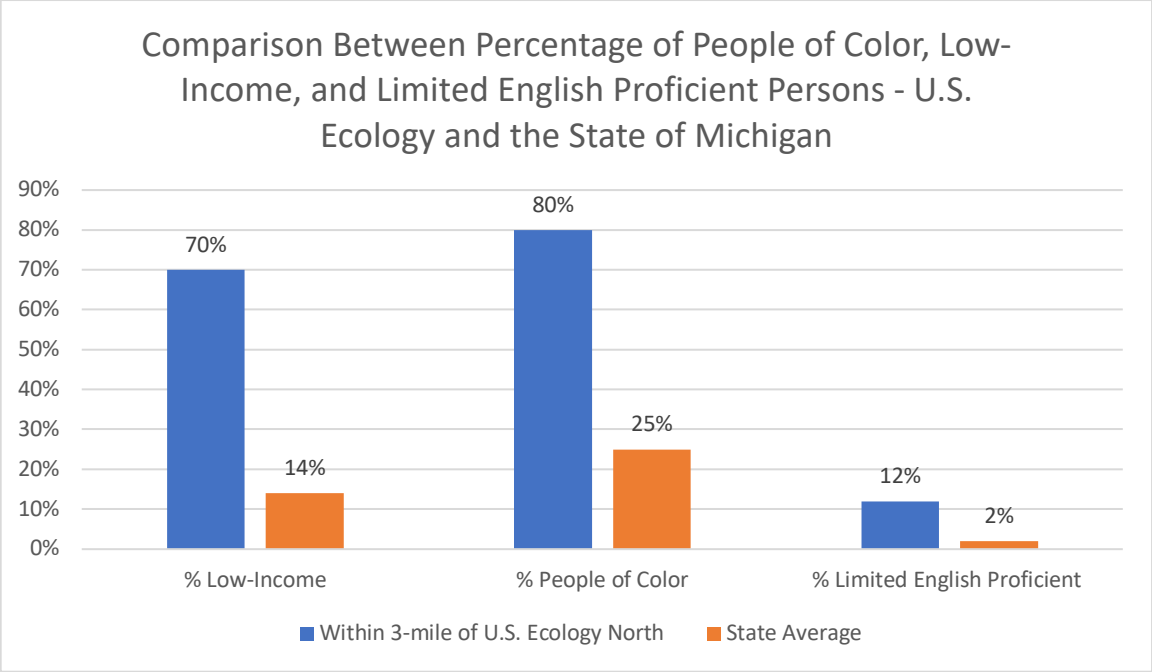

Figure 5 - Chart Comparing Percentages of People of Color, Low-Income, and Limited English Proficiency within 3 miles of U.S. Ecology North v Statewide Data.[40]

In its summary of the history of the U.S. Ecology North facility, EGLE states that the "surrounding area has gone from residential to industrial."[41] This callous statement ignores the history of housing discrimination and slum clearance for industrial activity that turned what was once one of Detroit's few Black enclaves into a community that is disproportionately composed of low-income people of color. EGLE's statement is also plainly incorrect, as thousands of people live nearby the Facility. Specifically, 2,005 people live within a 0.5-mile radius of the Facility and 8,910 people live within a 1-mile radius of the Facility.[42] As illustrated by the map below, the Facility is just over 200 meters from the nearest occupied residential housing, 300 meters from a church, and 500 meters from a children's playground. In all, four playgrounds, five parks, seven nursing homes, three mosques, 11 churches, four pre-school head start programs, three elementary and middle schools, and a high school are located within a 1.5-mile

[39] Low-income refers to any person whose ratio of household income to poverty level in the past 12 months was less than 2.
[40] EJSCREEN Report (Version 2019), 3-mile ring centered at U.S. Ecology North; LEP data from U.S. Census Bureau. (2017). 2011-2015 ACS 5-year Estimates. Retrieved from https://data.census.gov/
[41] Michigan Department of Environmental Quality. US Ecology Detroit North (formerly Dynecol) Summary Report. https://www.michigan.gov/documents/deq/USE_565_summary_529374_7.pdf
[42]United States Environmental Protection Agency. 2019 version. EJSCREEN. Retrieved July 22, 2020, from https://ejscreen.epa.gov/mapper/demogreportpdf.aspx?report=acs2017. US Census Bureau, American Community Survey (ACS) 2013-2017.

radius of this hazardous waste facility. The neighborhood surrounding U.S. Ecology is plainly not "industrial."

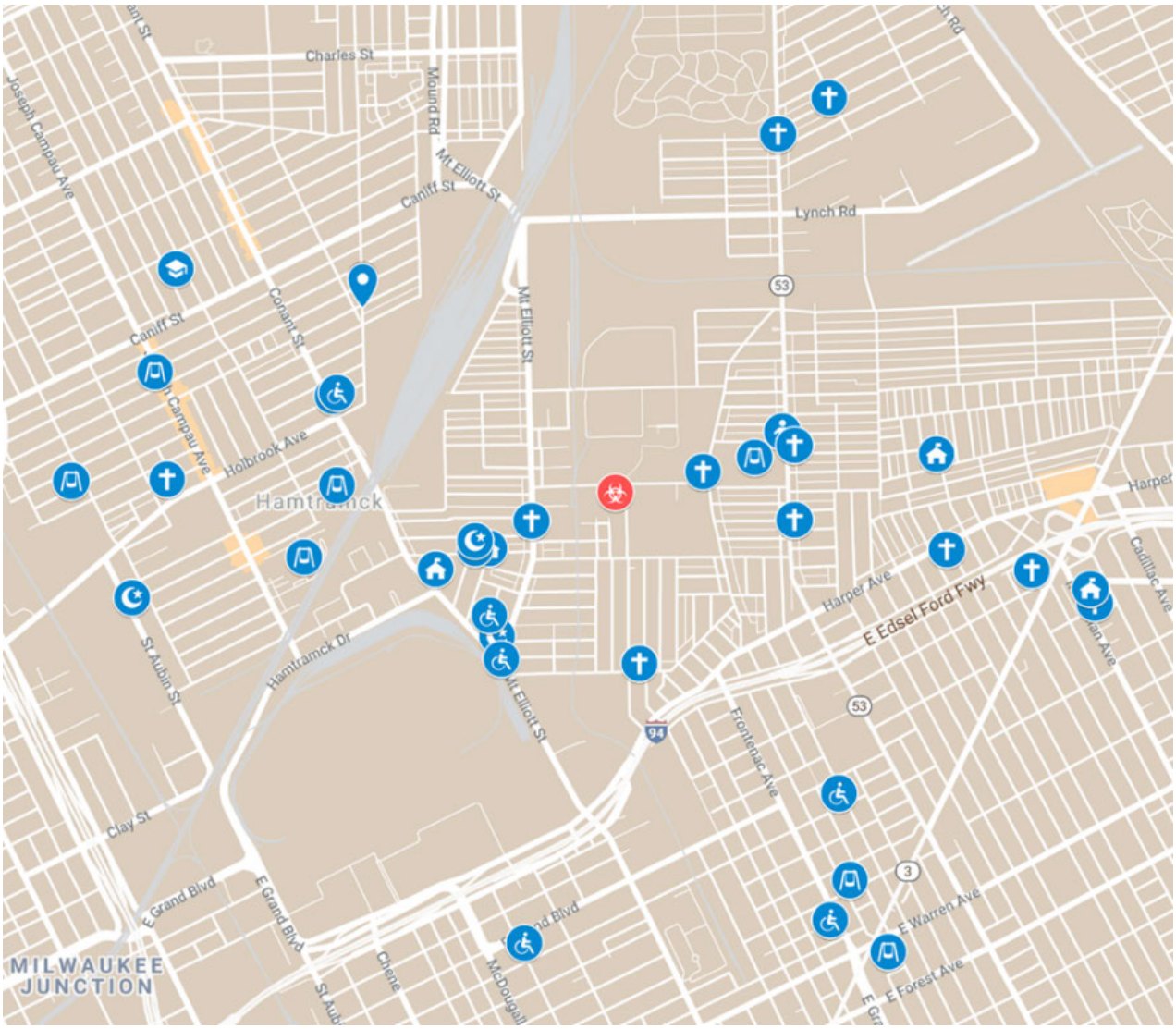

Figure 6 - Map of schools, houses of worship, playgrounds, parks, and nursing homes within 1.5 miles of US Ecology North

The effect in asserting the falsehood that the "surrounding area has gone from residential to industrial" in response to the concerns of citizens is to deny the existence of these communities. In reality, US Ecology North exists is on a slim industrial zone surrounded on three sides by residential housing (green in the image below).[43] 3,730 housing units are located within a 1-mile radius of the facility.[44]

[43] City of Detroit, Zoning Portal. https://zoning.detroitmi.gov/projects/381907/guide/location
[44] United States Environmental Protection Agency. 2019 version. EJSCREEN. Retrieved July 22, 2020: from https://ejscreen.epa.gov/mapper/demogreportpdf.aspx?report=acs2017. US Census Bureau, American Community Survey (ACS) 2013-2017.

Figure 7 – Map of Residential Areas Nearby U.S. Ecology North[45]

The sheer density of residential housing in the census tract where the Facility is located makes for an average population density of 1,120 individuals per square mile, over six times the state average population density.[46] A half-mile to the east marks the start of another census tract, hosting a population density of 5,209 people per square mile, over 25 and a half times the state average population density.[47] The census tract beginning a mere .25 miles west of the Facility hosts a population density of 7,567 individuals per square mile, 43 times the state average population density.[48] Beginning less than one mile from the facility is the densest census tract in the entire state of Michigan outside of the Michigan State University Campus in East Lansing.[49] Located in Hamtramck, the tract has a population density of 19,323 individuals per square mile, 109 times the state average population density. [50]

[45] City of Detroit, Zoning Portal. https://zoning.detroitmi.gov/projects/381907/guide/location
[46] United States Census Bureau, 2008-2012 ACS 5 Year Dataset. (2013). Retrieved from EPA Community FERST
[47] Id.
[48] Id.
[49] Id.
[50] Id.

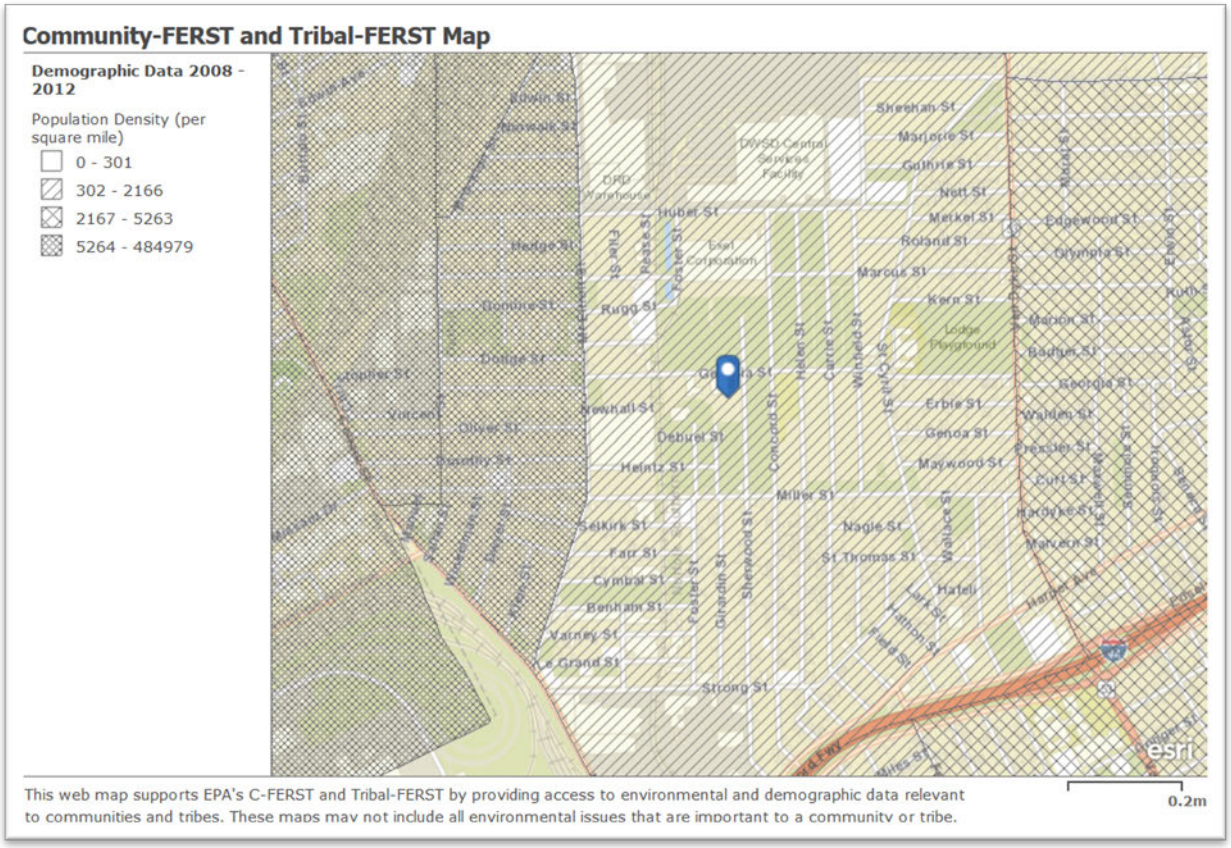

Figure 8 - Map of Population Density Near U.S. Ecology North by Census Tract[51]

In short, EGLE's assertion that the area surrounding U.S. Ecology North has transitioned from a residential to an industrial area is not only incorrect, but it is also having the harmful effect of continuing the erasure of the many people of color that do live nearby the Facility.

To place U.S. Ecology North in context, it is helpful to compare it to another commercial hazardous waste facility in Michigan. Comparing the demographics of the communities surrounding U.S. Ecology North with that of Drug and Laboratory Disposal, Inc, which is the only commercial hazardous waste facility in Michigan that is outside of the metro-Detroit area, helps to bring the environmental injustice into focus. Residing in Allegan County, Drug and Laboratory Disposal Inc.'s census tract has an average density of 305 people per square mile.[52] The only other census tract within a mile of the facility hosts a density of only 247 individuals per square mile.[53] More people live within a three-mile radius of U.S. Ecology North encompassing 28 square miles than within an 11-mile radius of Drug and Laboratory Disposal, an area encompassing a total of 380 square miles[54] Accompanying the area's low density is the smallest percentage of minorities, the lowest percentage of low-income households and limited English proficiency individuals within 3 miles of any of Michigan's commercial hazardous waste

[51] United States Census Bureau, 2008-2012 ACS 5 Year Dataset. (2013). Retrieved from EPA Community FERST
[52] United States Census Bureau, 2008-2012 ACS 5 Year Dataset. (2013) Retrieved from https://data.census.gov/
[53] Id.
[54] Id.

facilities, as well as the lowest amount of tonnage received both as a total and that which came from out of state.

Table 1 - Demographic and Tonnage Data Comparison Between U. S. Ecology North and Drug and Laboratory Disposal[55]

Facility	LEP per square mile within 3 miles	% Minority within 3 miles	Total Tons of Hazardous Waste Received	Total Tons of Hazardous Waste from MI	Total Tons of Hazardous Waste from Outside County	Percent of Total Tons of Hazardous Waste from Out of State
Drug and Laboratory Disposal	5	7%	942	850	812	9.7%
US Ecology North	468	80%	22,409	18,069	17,776	19.4%

In summary, the communities surrounding U.S. Ecology North are socioeconomically vulnerable, which puts them at risk for just the type of expansion that U.S. Ecology North proposed to EGLE. Almost 40 years after the residents of Warren County steadfastly declared their right to live free of the disparate burden of toxins, the residents living nearby U.S. Ecology North staged numerous protests and packed public hearings to oppose the state's decision to allow their community to be a dumping ground for hazardous waste.[56] In comment after comment, they decried the inequity inherent in approving a major expansion of a commercial hazardous waste facility in a low-income community of color, and the adverse impacts that such a decision will bring. The Detroit and Hamtramck community has proudly built upon the legacy

[55] U.S. Census Bureau. 2011-2015 ACS 5-year Estimates. (2017). Retrieved from https://data.census.gov/; United States Environmental Protection Agency, RCRAInfo Public Extract. Retrieved from https://rcrapublic.epa.gov/rcra-public-export/?outputType=CSV.

[56] *See generally Neighbors, Residents Protest Expansion of Hazardous-Waste Plant,* https://www.publicnewsservice.org/2017-08-23/water/neighbors-residents-protest-expansion-of-hazardous-waste-plant/a59071-1 (last visited Jul 22, 2020).; *Group rallies against expansion of waste facility near Detroit-Hamtramck border*, , https://www.detroitnews.com/story/news/local/detroit-city/2019/06/29/group-rallies-against-expansion-waste-facility-near-detroit-hamtramck-border/1607128001/ (last visited Jul 22, 2020); Sarah Cwiek, *Protesters keep up the fight against U.S. Ecology Detroit expansion*, https://www.michiganradio.org/post/protesters-keep-fight-against-us-ecology-detroit-expansion (last visited Jul 22, 2020); Steve Neavling, *Expansion of hazardous waste plant in Detroit smacks of "environmental racism," Rep. Robinson says*, DETROIT METRO TIMES, https://www.metrotimes.com/news-hits/archives/2020/01/31/expansion-of-hazardous-waste-plant-in-detroit-smacks-of-environmental-racism-rep-robinson-says (last visited Jul 22, 2020); Mary Schuermann Kuhlman, *Michiganders find solidarity in fighting hazardous waste*, DETROIT METRO TIMES , https://www.metrotimes.com/news-hits/archives/2020/02/12/michiganders-find-solidarity-in-fighting-hazardous-waste (last visited Jul 22, 2020).

of Warren County. It has also been informed by the mountains of data and research that the Warren County protests inspired that continues to pile the now irrefutable evidence that discrimination, whether outright in the past or self-perpetuating in the present, continues to impact decision making when siting hazardous waste facilities.[57]

ii. Environmental Quality of the Surrounding Area

The community understands the reality: that the operation of U.S. Ecology North presents serious public health risks for nearby residents. However, U.S. Ecology North does not exist in isolation. In addition to the Facility, numerous other industrial facilities are located nearby, including Strong Steel, Universal Logistics, and Flex-n-Gate. When the impact of all these facilities is considered cumulatively, it is apparent that the community is subject to a disproportionate level of a variety of environmental risks. As shown by Table 2 below, the 3-mile ring centered at the US Ecology facility ranks in the 90th percentile or higher for seven

[57] *See* Bonam, C. M., Bergsieker, H. B., & Eberhardt, J. L. (2016). Polluting Black space. *Journal of Experimental Psychology: General, 145*(11), 1561–1582. (Where a national sample of over 400 white U.S. citizens were asked to read a proposal to build a potentially hazardous chemical plant near a residential neighborhood. Half of the participants were told the nearby neighborhood is mostly black, while the other half was told that the area is mostly white. Even though all participants read the same proposal, they were less likely to report opposition to building the chemical plant when the nearby neighborhood was mostly black.)

harmful environmental indicators, including levels of particulate matter, diesel particulate matter, the cancer risk from air toxins, risk of respiratory hazards, and proximity to sites mandated to produce Risk Management Plans.[58] Tied for worst of all indicators, the community is in the 94th percentile in the state for its proximity to hazardous waste.[59] A mere 6% of the state faces a higher risk in this regard.

Environmental Indicators: 3-mile Ring Centered at 6520 Georgia St, Detroit, MI			
Variable	Statewide Average	Within 3mi radius of US Ecology	Percentile in State
Particulate Matter (PM 2.5 in ug/m3)	8.56	9.61	90
Ozone (ppb)	44.0	45.7	88
NATA Diesel PM (ug/m3)	0.34	0.68	94
NATA Air Toxics Cancer Risk (risk per MM)	24	30	94
NATA Respiratory Hazard Index	0.29	0.37	93
Traffic Proximity and Volume (daily traffic count/distance to road)	660	1800	91
Lead Paint Indicator (% pre-1960s housing)	38%	80%	87
Superfund Proximity (site count/km distance)	0.15	0.07	53
RMP Proximity (facility count/km distance)	0.53	2.00	94
Hazardous Waste Proximity (facility count/km distance)	1.00	3.70	94
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.23	1.00E-05	49

Table 1 – Comparing EPA Environmental Indicators Within 3-Mile Ring Centered at U.S. Ecology North Facility with Michigan Statewide Average and Area's Percentile For Each Indicator as Compared to Rest of State of Michigan.

When the demographic and environmental indicators generated by the EPA's EJSCREEN are combined, the picture facing communities among whom this hazardous waste site stands becomes clear. In this area, one of the most densely populated sites in the state, the EPA tool estimates residents are within the 87th to 97th percentile in the state for every applicable Environmental Justice risk.[60]

[58] United States Environmental Protection Agency. 2019 version. EJSCREEN. Retrieved July 22, 2020: from https://ejscreen.epa.gov/mapper/ejscreen_SOE.aspx.
[59] Id.
[60] United States Environmental Protection Agency. 2019 version. EJSCREEN. Retrieved July 22, 2020: from https://ejscreen.epa.gov/mapper/ejscreen_SOE.aspx.

Environmental Justice Indexes: 3-mile Ring Centered at 6520 Georgia St, Detroit, MI	
Variable	**Percentile in State**
EJ Index for Particulate Matter (PM 2.5)	92
EJ Index for Ozone	92
EJ Index for NATA Diesel PM	95
EJ Index for NATA Air Toxics Cancer Risk	93
EJ Index for NATA Respiratory Hazard Index	93
EJ Index for Traffic Proximity and Volume	95
EJ Index for Lead Paint Indicator	93
EJ Index for Superfund Proximity	90
EJ Index for RMP Proximity	97
EJ Index for Hazardous Waste Proximity	96
EJ Index for Wastewater Discharge Indicator	87

Table 2 - EJSCREEN Report (Version 2019)

The Environmental Justice Index reaching the second-highest percentile of risk is, even before this expansion, the proximity to hazardous waste. When combining the area's data on demographics with that of nearby hazardous waste sites, the Environmental Justice Index for hazardous waste proximity for the 3-mile ring centered at the US Ecology facility is already at a higher risk of environmental injustice due to hazardous waste than 96% of Michigan, before any additional expansion of capacity has begun.[61]

iii. Location of Origin Regarding Hazardous Waste Received by U.S. Ecology North

As detailed above, the communities surrounding U.S. Ecology North are diverse and vibrant but are also socioeconomically and politically vulnerable because they are predominantly composed of low-income people of color. Given this vulnerability, these communities have been targeted for industrial development since the 1950s, which has resulted in a number of industrial sites locating in this dense urban neighborhood. This has caused the surrounding communities to be exposed to high levels of a variety of environmental risks.

To make matters worse, their community is serving as a hazardous waste dumping ground that primarily serves other communities throughout the state and country. Data from US Ecology North's 2017 Biennial Report shows that 98.38% of the waste received by the Facility came from outside of Wayne county. A summary of the place of origin for wastes received by U.S. Ecology North is provided in Table 4 below:

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[61] Id.

Table 4 - Place of Origin Regarding Wastes Received by U.S. Ecology in 2017[62]					
	Total Tons Received	From In-State	From Wayne County	From Other MI Counties	From Out of State
Tons	22,409	18,069	292	17,776	4,340
Percent	-	80.63%	1.62%	79.01%	19.37%

E. Commercial Hazardous Waste Facilities in Michigan

U.S. Ecology North does not exist in isolation. It is one of several commercial hazardous waste facilities that exist throughout Michigan. Unfortunately, most commercial hazardous waste facilities in Michigan are similar to U.S. Ecology North in that they are disproportionately located in low-income communities of color. Additionally, most of the hazardous waste received by these facilities originated outside of Michigan.

i. Demographic Data Regarding Communities Nearby Commercial Hazardous Waste Facilities

Michigan currently houses eight hazardous waste facilities permitted to accept offsite waste.[63] As demonstrated by Table 5 below, of these eight facilities, seven are in communities where the percentage of people of color within a three-mile radius of the facility is at or above the statewide average.[64] Five are located in communities where within a three-mile radius of the facility, the percentage of low-income residents is above the statewide average.[65]

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[62] 2017 Biennial Report, U.S. Ecology North
[63] Michigan Department of Environmental Quality, Waste Data System, https://www.deq.state.mi.us/wdspi/AdvancedSearch.aspx (last visited Jul 22, 2020).
[64] United States Environmental Protection Agency. 2019 version. EJSCREEN. Retrieved July 22, 2020: from https://ejscreen.epa.gov/mapper/ejscreen_SOE.aspx.
[65] Id. (EPA calculates "percent low-income" as percent of individuals whose ratio of household income to poverty level in the past 12 months was less than 2 as a fraction of individuals for whom ratio was determined. Calculated from the Census Bureau's American Community Survey 5-year summary estimates.)

Demographic Data of MI Hazardous Waste Treatment Facilities Accepting Offsite Waste Compared to State Averages			
Specific Site Name	**City, County**	**% Low Income within 3 Mi Radius ***	**% Minority within 3 mi Radius**
Wayne Disposal Inc.	Belleville, Wayne	**30%**	**39%**
Michigan Disposal Waste Treatment Plant	Belleville, Wayne	**30%**	**39%**
US Ecology Detroit North	Detroit, Wayne	**70%**	**80%**
PSC Environmental Services	Detroit, Wayne	**55%**	**79%**
US Ecology Detroit South	Detroit, Wayne	**65%**	**75%**
Gage Products Co.	Ferndale, Oakland	**44%**	**54%**
Drug & Laboratory Disposal, Inc.	Plainwell, Allegan	**29%**	**7%**
Republic Industrial and Energy Solutions	Romulus, Wayne	**46%**	**40%**
Michigan Average		**33%**	**25%**

Table 3 - EJSCREEN Report (Version 2019), 3-mile ring centered on Michigan commercial hazardous waste facilities

When analyzed cumulatively, of all the Michiganders living within 3-miles of a commercial hazardous waste facility accepting offsite waste, 55% are low-income, and 65% are minorities as defined by the US Census Bureau. As shown by Figure 9, while the total population of individuals living within 3-miles of these facilities makes up just 5% of Michigan's population, it makes up 14% of the state's total population of minorities.

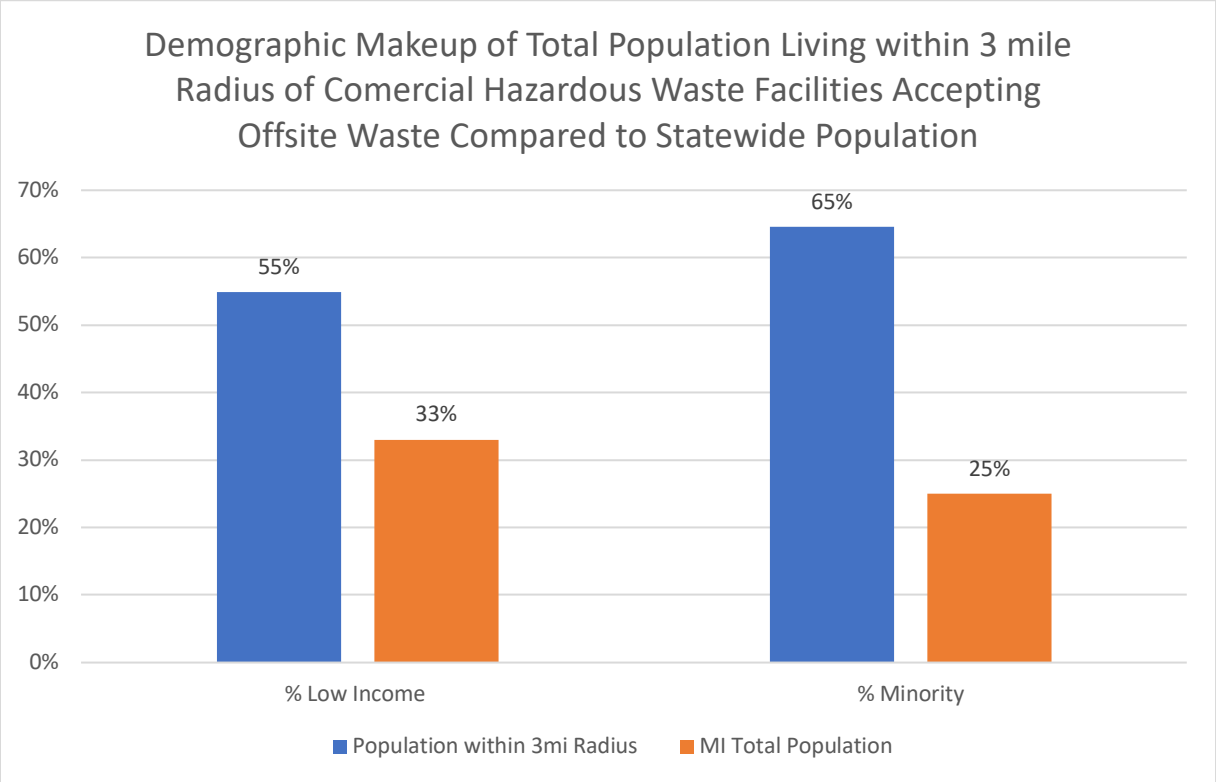

Figure 9

In addition to commercial hazardous waste facilities being disproportionately located in low-income communities of color, they are also disproportionately located in limited English proficient communities. 21,975 individuals with limited English proficiency, 7 percent of the statewide total, live within 3 miles of Michigan's eight hazardous waste facilities.[66] As illustrated by Table 6, the density of limited English proficient individuals within 3 miles of each of the eight facilities exceeds the Michigan average.[67] In total, the average density of limited English proficient individuals within the areas encompassing the 3-mile radii of all of the facilities is 148 per square mile, greater than the Michigan average of 3.1 per square mile by a factor of nearly 48.[68]

Table 6 - Density of LEP persons per square mile for area within 3-mile radius of each commercial hazardous waste facility	
Facility	Density of LEP per square mile within 3-mile radius of facility
Michigan Average	3.1
Republic Industrial	77.64
Michigan Disposal	25.73
Wayne Disposal	25.73
Drug and Laboratory Disposal, Inc.	5.02
PSC Environmental Services	20.67
EQ Detroit	401.98
US Ecology North	468.72
Gage Products Co	159.41

Six of the eight facilities reside in Wayne County, with one more sitting a mere 495 meters from the county's border. Wayne County hosts the largest and most densely populated Limited English Proficiency communities in the state, with an average density of limited English proficient persons per square mile that is 3,817% that of the state average.[69]

ii. Location of Origin Regarding Hazardous Waste Received by All Michigan Commercial Hazardous Waste Facilities

As discussed above, Michigan's trend of siting commercial hazardous waste facilities in low-income communities of color has continued unabated for several decades. In 2007, the United Church of Christ found Michigan to be the worst state when it came to disproportionately siting commercial hazardous waste facilities in communities of color. That legacy of environmental injustice has to date been left intact, unchallenged, and unaltered.

[66] U.S. Census Bureau. 2011-2015 ACS 5-year Estimates. (2017). Retrieved from https://data.census.gov/
[67] Id.
[68] U.S. Census Bureau. 2011-2015 ACS 5-year Estimates. (2017). Retrieved from https://data.census.gov/
[69] Id.

To make matters worse, there does not appear to be any logistical justification for siting commercial hazardous waste facilities in these communities. As shown by Table 7, all but one of these facilities imported over 90% of their hazardous waste from outside the county they are located.[70] In total, 222,034 tons of hazardous waste were imported into Michigan in 2017, roughly equivalent to the weight of Chicago's Sears Tower[71] or 8 Statue of Liberties.[72] As shown by Figure 10, the imported waste traveled from far and wide, including 317 tons making the over 7,000 mile trip across the world from the Northern Mariana Islands, 1000 miles off the coast of Japan, to make Michigan its resting place.[73]

Figure 10 – Map demonstrating the location of origin for shipments of hazardous waste received by commercial hazardous waste facilities in Michigan

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[70] Id.
[71] History & Facts—Willis Tower, https://www.willistower.com/history-and-facts (last visited Jun 29, 2020).
[72] Mailing Address: Liberty Isl, New York & NY 10004 Phone:363-3200 Contact Us, *Statue Statistics—Statue of Liberty National Monument (U.S. National Park Service)*, https://www.nps.gov/stli/learn/historyculture/statue-statistics.htm (last visited Jun 29, 2020).
[73] United States Environmental Protection Agency, 2017 Hazardous Waste Interstate Shipments and Receipts, https://public.tableau.com/shared/M4D9KK239?:display_count=y&:origin=viz_share_link&:embed=y (last visited Jul 22, 2020).

Table 7 – Percentage of Hazardous Waste Received from Out of State and from In-State/Out of County for Each Michigan Commercial Hazardous Waste Facility

Facility	County	Total Tons Received[74]	Percent from Out of State	Percent from Out of County/In-State
Republic Industrial	Wayne	8,672.31	**14.30%**	**27.30%**
Michigan Disposal	Wayne	122,535.3	**91.00%**	**97.90%**
Wayne Disposal	Wayne	17,085.48	**49.30%**	**96.90%**
Drug and Laboratory Disposal, Inc.	Allegan	942.12	**9.70%**	**96.00%**
PSC Environmental Services	Wayne	71,712.77	**53.10%**	**93.10%**
EQ Detroit	Wayne	52,582.3	**86.00%**	**96.60%**
US Ecology North	Wayne	22,409.78	**19.40%**	**98.70%**
Gage Products Co	Oakland	20,611.04	**68.70%**	**99.50%**
Totals		316,548	**70%**	**25%**

[74] United States Environmental Protection Agency, RCRAInfo Public Extract. Retrieved from https://rcrapublic.epa.gov/rcra-public-export/?outputType=CSV.

As shown in Table 8, Ohio is the top importer of hazardous waste to Michigan.

Tons of Hazardous Waste Imported to Michigan by State (2017)	
Ohio	76,857
New Jersey	21,284
Illinois	17,944
Indiana	15,972
New York	15,685
Pennsylvania	14,320
Wisconsin	10,059
Kentucky	9,133
Missouri	8,241
Minnesota	7,216

Table 4

While the originating locations of this hazardous waste encompass a broad geographic scope, the same cannot be said for the distribution upon reaching Michigan. As shown by Figure 11, despite making up only 17.5% of the state's population, Wayne County is the destination for 94% of offsite hazardous waste arriving from other states.[75]

Figure 12 below, generated through the EPA's EJSCREEN, visualizes the overlap between proximity to hazardous waste and the presence of large communities of minorities.[76] The initial layer identifies locales where residents live in close proximity to hazardous waste based on statewide percentiles. The highest percentiles, 80-90, 90-95, and 95 to 100, are identified as yellow, orange, and red, respectively.

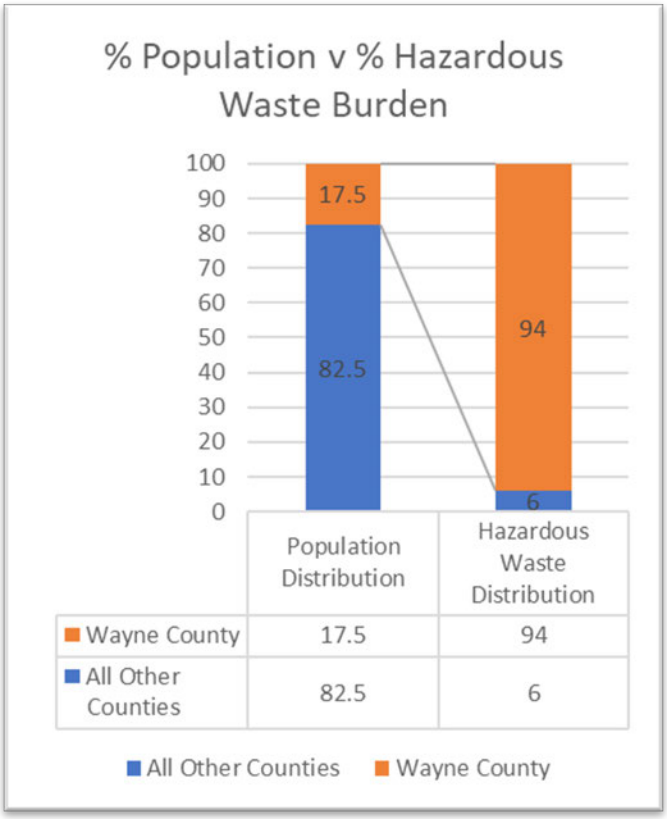

Figure 11 – Chart comparing the percentage of the state population in Wayne county to the percentage of out-of-state hazardous waste received by Wayne County commercial hazardous waste facilities

[75] United States Environmental Protection Agency, RCRAInfo Public Extract. Retrieved from https://rcrapublic.epa.gov/rcra-public-export/?outputType=CSV

[76] United States Environmental Protection Agency. 2019 version. EJSCREEN. Retrieved July 22, 2020: from https://ejscreen.epa.gov/mapper/ejscreen_SOE.aspx

Transposed on top of this layer is the minority makeup of populations across the state, denoted by transparent gray dots where their respective size reflects the percentage of minorities making up the population. Nearly all areas within the 80th to 100th percentile of proximity to toxic waste are overwhelmingly blanketed by the minority population layer. At the same time, few high percentage minority populations are found in areas that are not near commercial hazardous waste facilities.

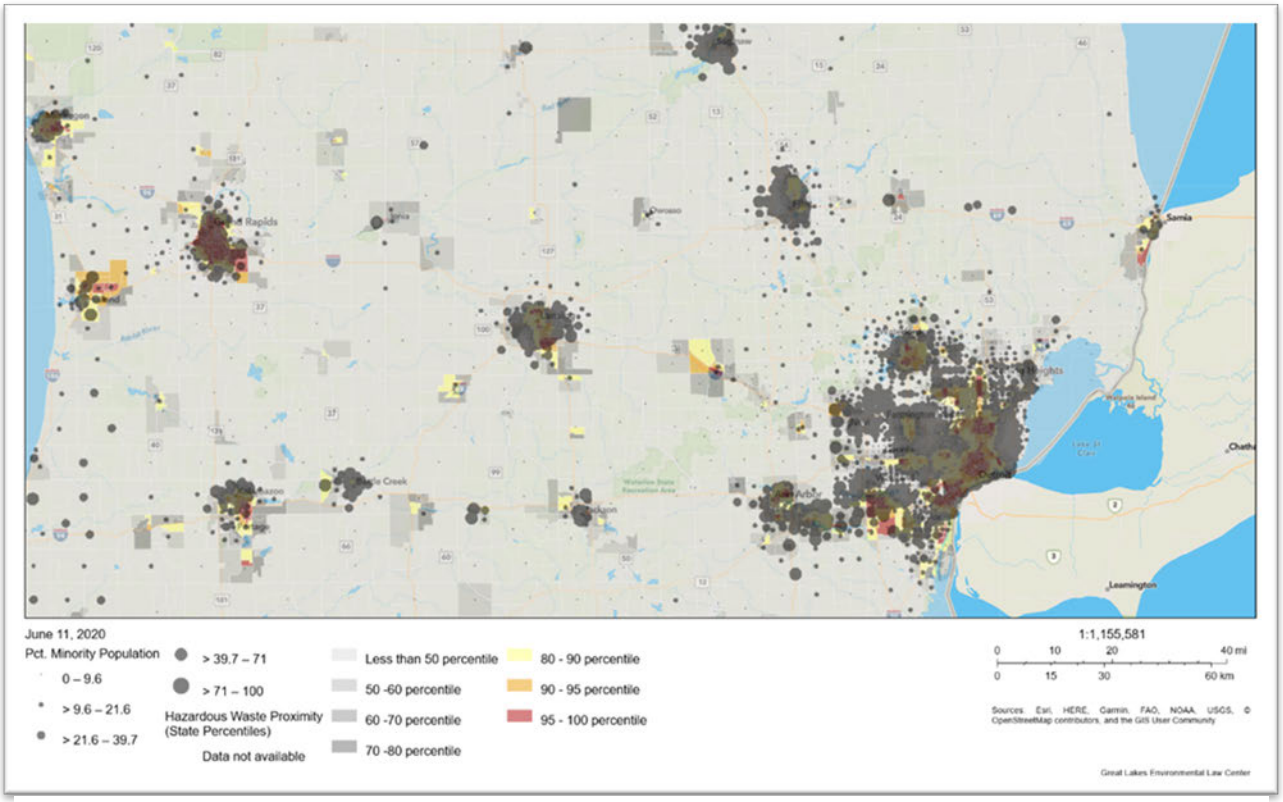

Figure 12 – Map overlaying the percentage of minority population with proximity to a hazardous waste facility

III. Legal Background

Since the origins of the environmental justice movement, communities of color have often turned to Title VI of the Civil Rights Act of 1964 ("Title VI") for redress when a federally supported state environmental program has the purpose or effect of discrimination against individuals based on their race, color, or national origin. Section 601 of Title VI requires that "[n]o person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."[77] In addition to Section 601, Section 602 directs federal agencies that are empowered to extend financial assistance to issue rules, regulations, or orders of general applicability, "which shall be consistent with achievement of the objectives" of

[77] 42 USCS § 2000d

Title VI.[78] In accordance with Section 602, the EPA first promulgated its Title VI regulations in 1973.[79]

In addition to Section 602, Executive Order 12898, which was signed by President Clinton in 1994, directs the EPA to make achieving environmental justice part of its mission "by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."[80] To accomplish the environmental justice goals outlined in Executive Order 12898, federal agencies may implement policies affecting the funding distributed to state agencies.[81]

Since its adoption in 1964, the Civil Rights Act has served as the principal federal authority prohibiting state agencies from engaging in discrimination on the basis of race, color, or national origin. The passage of this statute was one of the crowning legislative achievements of the civil rights movement of the 20th century. Soon to follow the Civil Rights Act was the passage of a multitude of federal environmental laws throughout the 1970s and 1980s. Most of these federal environmental laws rely on the framework of cooperative federalism. Pursuant to this framework, federal environmental laws establish the baseline standards, and require states, through their respective environmental regulatory departments, to adopt and implement state laws and regulations in a manner that is sufficient to meet the federal baseline standards. Given the central role of state environmental regulatory departments in the implementation of federal environmental laws, it is no surprise that the environmental justice movement has frequently turned to Title VI of the Civil Rights Act for redress. Further, Executive Order 12898 has essentially melded the concept of environmental justice to Title VI regulations promulgated by federal agencies such as the EPA. These regulations function independently of state and federal environmental laws to ensure that state environmental regulatory agencies' activities are furthering environmental justice and are not perpetuating our nation's legacy of environmental racism.

A. Federal Laws Governing Hazardous Waste Permitting

Like most federal environmental laws, federal laws regarding hazardous waste storage, treatment, management, and disposal rely on the concept of cooperative federalism. The Resource Conservation and Recovery Act ("RCRA") of 1976 is the principal federal law that governs the regulation of hazardous waste generation, transportation, storage, treatment, and disposal.[82] The EPA then commonly authorizes states to administer and enforce state laws and regulations that are at least as stringent as federal requirements.[83] Under RCRA, states do have

[78] 42 USCS § 2000d-1
[79] 38 FR 17968 (1973), as amended by 49 FR 1656 (1984) (codified at 40 CFR part 7).
[80] "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 59 Fed. Reg. 7629 (Feb. 11, 1994)
[81] Environmental Protection Agency, *Title VI EJ Comparison*, https://www.epa.gov/sites/production/files/2015-02/documents/title-vi-ej-comparison.pdf (last visited Jul 10, 2020).
[82] 42 U.S.C. § 6901. (Pub. L. 89–272, title II, § 1002, as added Pub. L. 94–580, § 2, Oct. 21, 1976, 90 Stat. 2796; amended Pub. L. 95–609, § 7(a), Nov. 8, 1978, 92 Stat. 3081; Pub. L. 98–616, title I, § 101(a), Nov. 8, 1984, 98 Stat. 3224.); 42 U.S.C. § 6905, 6912(a), and 6926.
[83] 42 U.S.C. § 6926(b).

the authority to enact more stringent requirements than those described in RCRA and its corresponding regulations.[84]

Regarding permitting, section 6925(c)(3) provides that "[e]ach permit issued under this section shall contain such terms and conditions as the Administrator (or the State) determines *necessary to protect human health and the environment.*"[85] The EPA has noted that this omnibus clause provides permitting agencies with the discretion to take a more refined look at the public health and environmental impacts of hazardous waste facilities in light of allegations that operations of the facility could have a disproportionate impact on low-income or minority populations.[86] This omnibus clause could be used to require an analysis of the following issues:

- Cumulative risks due to exposure from pollution sources in addition to the applicant facility; [87]
- Unique exposure pathways and scenarios (e.g., subsistence fishers, farming communities); [88]
- Sensitive populations (e.g., children with levels of lead in their blood, individuals with poor diets).[89]

As shown by Table 9 below, many states have used the authority reserved to them under RCRA to adopt laws, regulations, and policies aimed at ensuring that hazardous waste facilities are not disproportionately sited in communities of color.

[84] 42 U.S.C. § 6929
[85] 42 U.S.C. § 6925(c)(3)
[86] Id.; *See* 50 Fed. Reg. Vol. 50. No. 135. 28,723. where EPA states "Section 3005(c) provides that each RCRA permit issued under section 3005 shall contain such terms as the Administrator deems necessary to protect human health and the environment. The Congressional intent underlying this amendment is to authorize the Agency to impose permit conditions beyond those mandated by the regulations, such as new or better technologies or other new requirements. The purpose of this amendment is to upgrade facility requirements in order to protect human health and the environment. The Agency believes that the authority to *issue* permits containing conditions deemed necessary to protect human health and the environment must encompass the authority to *deny* permits where necessary to afford such protection. To hold otherwise would deprive this statutory amendment of its intended effect." (emphasis in original, internal quotations omitted). *See also In Re Ecolotec, Inc*. RCRA Appeal No. 87-14. (1988) (where EPA Administrator finds Agency's conclusion that is had "no authority to deny [a] permit application based on [a] City's concerns because the facility complies with existing location standards and other RCRA regulations… is clearly erroneous" citing RCRA 3005(c)(3).)
[87] *EPA Statutory and Regulatory Authorities Under Which Environmental Justice Issues May Be Addressed in Permitting*. MEMORANDUM. 3. Dec. 1, 2000. Also see *In Re Chemical Waste Management of Indiana, Inc.*, 6 E.A.D. 66 (EAB 1995).
[88] Id.
[89] Id.

Table 9 – Table of State Laws Regarding the Location of Hazardous Waste Facilities	
State	**Statutory Language**
Arkansas AR ST § 8-7-223	Prohibits any hazardous waste landfill disposal facility off the site of generation shall be ***located within one-half (½) mile of any occupied dwelling***
Colorado CO ST § 25-15-505: (a) (I), II)	Requires permitting agency to take into consideration: (I) the ***density of population in the areas neighboring*** such proposed site; (II) The ***density of population*** in the areas that are ***adjacent to any portion of delivery roads*** to such proposed site and that lie ***within a fifty-mile radius*** of such proposed site
Florida FL ST § 403.7211: (2)	Prohibits any hazardous waste facility from: (b) Any location within ***1,500 yards of any hospital, prison, school, nursing home facility, day care facility, stadium, place of assembled worship***, or any other similar site... (c) Any location within ***1,000 yards of any residence***.
Kentucky KY ST § 224.46-520: (1)(c)	[T]he cabinet… shall consider…: (c) An evaluation of the ***social and economic impacts*** of the proposed action on the affected community, to include, at a minimum, ***changes in property values, community perception*** and other ***psychic costs***, and the ***costs and availability of public services, facilities*** and ***improvements required to support the facility*** and protect public health, safety, and the environment
Louisiana LA R.S. 30:2178: (2)(b)	A facility or proposed facility may be deemed to pose undue health risks for the following nonexclusive reasons: (vii) The ***number and density of existing hazardous waste disposal facilities***
Maryland MD ENVIR § 7-402: (b)	These facilities shall be located subject to the following considerations: (9) That there is due consideration for the ***equitable geographic distribution of sites***, including: (ii) Consideration of those subdivisions that presently have sites, to ***avoid to the extent feasible certifying sites disproportionately in any one subdivision***

Missouri MO ST 260.431: 1	The size and nature of the ***buffer zone*** shall be determined by the department but ***shall extend at least three hundred feet*** from the facility, on property owned or leased by the applicant. The department shall consider the ***proximity of schools, businesses and houses, the prevailing winds,*** and other factors which it deems relevant when establishing a buffer zone.
New York NY ENVIR CONSER § 27-1102: 2	Requires the permitting agency to develop a state hazardous waste plan to ensure the ***equitable geographic distribution of hazardous waste facilities.***
Oklahoma OK ST T. 27A § 2-7-114 A	[N]o permit shall be issued for the off-site disposal of hazardous waste or for the off-site treatment of hazardous waste by incinerator at a new hazardous waste facility proposed to be located within ***eight (8) miles of the corporate limits of an incorporated city or town***…

New York's requirement for its permitting agency to develop a statewide hazardous waste management plan to ensure the equitable distribution of hazardous waste facilities is remarkably similar to a provision in Michigan law. MCL 324.11110(2)(f) requires EGLE to develop a statewide hazardous waste management plan to ensure the "reasonable geographic distribution" of hazardous waste facilities. Through this Plan, the permitting agency considers issues related to environmental justice when making its determination to grant, conditionally or otherwise, or deny a license for a new or expanded industrial hazardous waste facility.[90]

B. State Laws Governing Hazardous Waste Permitting

EGLE has been authorized to implement Michigan's hazardous waste program by the EPA.[91] As part of this program, any person that wants to construct a new hazardous waste treatment, storage, or disposal facility or to expand or enlarge an existing facility beyond its previously authorized design capacity must first obtain an operating license from EGLE.[92]

MCL 324.11123 describes the content requirements regarding an application "for an operating license for a proposed treatment, storage, or disposal facility or the expansion, enlargement, or alteration of a treatment, storage, or disposal facility beyond its original authorized design capacity or beyond the area specified in an existing operating license, original construction permit, or other authorization." The application must "demonstrate[e] that the applicant has considered each of the following:

[90] New York State Department of Environmental Conservation, Division of Environmental Remediation, New York State Hazardous Waste Facility Siting Plan, at 6-11 (Oct. 2010)
[91] *See,* Michigan State StATS Report, Mar. 31, 2020.
[92] Mich. Admin. Code, R. 299.9501(1).

(i) The risk and impact of accidents during the transportation of hazardous waste to the treatment, storage, or disposal facility.

(ii) The risk and impact of fires or explosions from improper treatment, storage, and disposal methods at the treatment, storage, or disposal facility.

(iii) The impact on the municipality where the proposed treatment, storage, or disposal facility is to be located in terms of health, safety, cost, and consistency with local planning and existing development, including proximity to housing, schools, and public facilities.

(iv) The nature of the probable environmental impact, including the specification of the predictable adverse effects on each of the following:

(A) The natural environment and ecology.

(B) Public health and safety.

(C) Scenic, historical, cultural, and recreational values.

(D) Water and air quality and wildlife.[93]

Where EGLE receives an operating license application that technically complies with the requirements outlined in section 11123(2), a review process is initiated. "[T]he department shall [r]eview the plans of the proposed treatment, storage, or disposal facility to determine if the proposed operation complies with this part and the rules promulgated under this part… The review shall include, but ***need not be limited to***, a review of air quality, water quality, waste management, hydrogeology, and the applicant's disclosure statement." [94]

Similar to the EPA's omnibus clause, EGLE is also authorized to require a license applicant to comply with permit terms and conditions to ensure the protection of human health and the environment or, in situations where such permit terms may be inadequate, to deny the license application. Mich. Admin. Code, R. 299.9602 requires all hazardous waste treatment, storage, and disposal facilities to be operated in a manner that will prevent exposure of humans or the environment to harmful quantities of hazardous waste or hazardous waste constituents and to prevent the pollution, impairment, or destruction of the natural resources of the state. Mich. Admin. Code, R. 299.9521(3) requires each operating license issued under Part 111 to include conditions necessary to "protect human health and the environment." The EPA has interpreted similar language in federal regulations to authorize the EPA to incorporate environmental justice considerations into its licensing process.

In addition to Part 111 and its corresponding regulations, MCL 324.11115 also requires EGLE to ensure that its decision to issue a hazardous waste license is consistent with Michigan's hazardous waste management plan. Michigan's original hazardous waste management plan was

[93] MCL 324. 11123 (2)(k)(i)-(iv)
[94] MCL 324. 11125 (1)(a), (b) (emphasis added)

adopted by the Commission of Natural Resources on January 25, 1982.[95] The legislature expressly required that this plan be updated by January 1, 1990.[96] Additionally, the legislature required that the updated plan provide for "a reasonable geographic distribution of treatment, storage, and disposal facilities" and to include "criteria for determining acceptable locations for such facilities."[97] The criteria must include a consideration of several factors, including the demography of the area surrounding the hazardous waste facility, waste generation patterns, environmental factors, and public health factors.[98]

Despite the statutory mandates to update the state hazardous waste management plan and to ensure that hazardous waste licensing decisions are consistent with such plan, EGLE's Materials Management Division was unable to produce a copy of Michigan's updated hazardous waste management plan.

C. U.S. Ecology North Hazardous Waste License

On January 29, 2020, EGLE issued an amended operating license to U.S. Ecology North. This license allows U.S. Ecology North to expand its storage capacity from 76,118 tons to 676,939 tons, which is a nearly 9-fold increase.[99] Additionally, the license enables U.S. Ecology to convert three 30,000-gallon pits for the treatment of hazardous waste. With these three pits, U.S. Ecology North is allowed to treat 600 gallons of hazardous waste per day.[100]

The license includes several terms, conditions, and plans with which the Facility must comply. This includes a waste analysis plan, contingency plan, and environmental monitoring requirements.

i. Waste Analysis Plan

The Waste Analysis Plan exists to make sure the Facility only accepts authorized wastes and fully complies with state and federal regulations. This plan is particularly essential since the acceptance of unauthorized wastes can lead to particularly catastrophic consequences due to the improper storage and handling of hazardous waste. In 2018, the acceptance of non-conforming waste at a U.S. Ecology facility in Idaho resulted in an explosion at the facility that killed one person and injured three more.[101] Also, in 2018, the acceptance of non-conforming waste at another U.S. Ecology facility in Idaho caused four drums containing hazardous waste to explode at the facility.[102]

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[95] MCL 324.11110 (2017).
[96] MCL 324.11110.
[97] Id.
[98] Id.
[99] Michigan Department of Environmental Quality, US Ecology (MID 074 259 565) Capacity Comparison Table (2019). https://www.michigan.gov/documents/deq/USE_565_Capacity_Comparison_Table_529373_7.pdf
[100] Id.
[101] Cause of deadly explosion at US Ecology site released, KTVB7, https://www.ktvb.com/article/news/local/investigation-into-the-explosion-at-us-ecology-that-killed-1-man-finds-the-cause-of-the-accident/277-f29df15a-6aad-4e61-a601-ee96319e894e (last visited Jul 24, 2020).
[102] Tami Thatcher Guest columnist, *Following regs could have prevented barrel explosion*, POST REGISTER, https://www.postregister.com/opinion/guest_column/following-regs-could-have-prevented-barrel-explosion/article_8a6eb93c-f521-5615-ae9b-e9850125d8fd.html (last visited Jul 24, 2020).

Regarding hazardous waste generated off-site, the Waste Analysis Plan requires the following:

1. For all shipments of hazardous waste, U.S. Ecology North personnel must review all paperwork, including the manifests to ensure it is accurate and complete;
2. For all shipments of hazardous waste, U.S. Ecology North personnel must conduct a visual inspection to ensure the containers are closed, there are no irregularities in the shipment, the labels are correct, and the number and type of containers match the manifest;
3. For at least 10% of the containers from each approved waste stream shipment, U.S. Ecology North will perform a fingerprint analysis and compared to the waste profile information provided by the generator.

Additionally, the license prohibits placing incompatible wastes and materials in the same container.[103] However, neither the license of the Waste Analysis Plan requires a compatibility analysis before hazardous wastes are repackaged, or before treatment. The Waste Analysis Plan does reference "pre-treatment analyses" to ensure that aggregated wastes are amenable to the same treatment, but it is unclear if or when such analyses are required.[104]

ii. Contingency Plan

The Contingency Plan establishes the procedures to be followed in the event of an emergency situation at U.S. Ecology North, such as a fire, explosion, or any unplanned release of hazardous waste or hazardous waste constituents to the air, soil, or water. It designates emergency coordinators at the Facility, procedures for identifying the release of hazardous waste or hazardous waste constituents, procedures for identifying potential hazards to human or environmental health, and Facility evacuation procedures.[105]

iii. Environmental Monitoring Requirements

In general, all hazardous waste storage and treatment facilities must conduct regular groundwater monitoring and soil monitoring.[106] These programs serve as safeguards for the public and the environment by ensuring that any hazardous waste or hazardous waste constituents that may be released into the environment are detected. EGLE has the authority to waive the requirements for groundwater monitoring under two circumstances. First, a waiver is allowable if all treatment, storage, and waste handling is conducted indoors or under a structure that protects from precipitation and runoff.[107] Second, a waiver is permissible if EGLE finds, based on the opinion of a qualified geologist or geotechnical engineer, that there is no potential for migration of a

[103] Michigan Department of Environment, Great Lakes, and Energy, US Ecology Michigan, Inc. Operating License. https://www.michigan.gov/documents/egle/egle-mmd-hws-USE565oplicense_679799_7.pdf.
[104] Michigan Department of Environment, Great Lakes, and Energy, US Ecology Waste Analysis Plan, https://www.michigan.gov/documents/deq/deq-owmrp-hws-draft_USE_565_Attachment_1_Waste_Analysis_Plan_494455_7.pdf
[105] Michigan Department of Environment, Great Lakes, and Energy, US Ecology Contingency Plan, https://www.michigan.gov/documents/deq/deq-owmrp-hws-draft_USE_565_Attachment_4_Contingency_Plan_494462_7.pdf.
[106] Mich. Admin. Code, R. 299.9611(2)(b), (d).
[107] Mich. Admin. Code, R 299.9611(3)(a).

liquid to the uppermost aquifer during the active life and post-closure care period.[108] EGLE may waive the requirement for soil monitoring if the owner or operator demonstrates it is not required.[109]

In the license at issue, EGLE waived the requirement for both groundwater monitoring and soil monitoring. It's reasoning for waiving the soil monitoring requirement as that all areas where hazardous waste is handled must be paved with concrete and asphalt and that specific areas, such as the container management building storage bays and the treatment area unloading pad, must be coated with chemical-resistant materials to prevent any release to the soil from storage or treatment activities.[110]

Notably, EGLE has previously issued groundwater and soil monitoring waivers to this Facility. The first soil monitoring waiver was granted in 1989. The application for the waiver stated that any hazardous waste that may be released would be detected by the groundwater monitoring program. However, in 2003, the requirement for groundwater monitoring was also waived. Now, despite the addition of new hazardous waste storage buildings and the new use of three 30,000-gallon pits for hazardous waste treatment operations, EGLE has decided to renew both waivers.

D. EPA's Title VI Regulations and Environmental Justice

As a federal agency that is authorized to extend financial assistance, the EPA has promulgated Title VI regulations pursuant to Section 602. These regulations are described in 40 C.F.R. Part 7 ("EPA's Title VI Regulations").[111] EPA's Title VI Regulations apply to all applicants for and recipients of EPA assistance in the operation of programs or activities.[112] As a recipient of EPA financial assistance, EGLE submitted assurance that it would comply with EPA's Title VI Regulations along with its applications for funding.[113] EGLE has also acknowledged its Title VI obligations in its RCRA Work Plan. Finalized in September of 2019, its "[RCRA] Work Plan for Fiscal Years 2020 and 2021" states openly that "[s]ince EGLE is a recipient of federal funds for administration of its RCRA Program, EGLE needs to incorporate EJ into their RCRA Program" and that the agency "recognizes that incorporating EJ into all aspects of the RCRA decision-making process is a top priority to the U.S. EPA." [114] The agency states that that, in its efforts to integrate Environmental Justice principles into the state program, it has "[i]ncluded [an] EJ evaluation step into permit application review process."[115]

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[108] Mich. Admin. Code, R. 299.9611(3)(b).
[109] Mich. Admin. Code R. 299.9611(4).
[110] Michigan Department of Environment, Great Lakes, and Energy, US Ecology Responsiveness Summary, https://www.michigan.gov/documents/egle/egle-mmd-hws-USE565ResponseSummaryEN_679676_7.pdf.
[111] 40 CFR 7.35.
[112] 40 CFR 7.15.
[113] 71 FR 14207
[114] Michigan Department of Environment, Great Lakes, and Energy. *Work Plan for Fiscal Years 2020 and 2021*. 7 (2019). https://www.michigan.gov/documents/deq/deq-whm-hwp-Fiscal-Year-RCRA-Grant-WorkPlan_342754_7.pdf.
[115] Id.

Pursuant to the EPA's Title VI Regulations, EGLE is obligated to comply with several requirements aimed at eliminating discrimination on the basis of race, color, or national origin. Relevant to this complaint are the following requirements:

- EGLE shall not exclude any person from participation in, deny any person the benefits of, or subject any person to discrimination under any program or activity receiving EPA assistance on the basis of race, color, national origin, or sex.[116]
- EGLE shall not use criteria or methods of administering its program or activity that have the effect of subjecting individuals to discrimination because of their race, color, national origin, or sex.[117]

Central to the EPA's Title VI implementing regulations is the *consequence* of agency policies and decisions, not their *intent*. As such, they include prohibitions against both intentional and unintentional discrimination by EGLE and other EPA funded agencies.[118]

Unintentional discrimination includes those actions that have a disproportionately adverse effect on individuals of a certain race, color, or national origin. Despite not being formalized in writing, a neutral policy or decision understood as a "standard operating procedure, "a failure to act, or a failure to proactively adopt an important policy can also constitute a violation of Title VI."[119] Recipients of federal financial assistance are prohibited from utilizing criteria or methods of administration that have the effect, ***even if unintentional***, of subjecting individuals to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the program's objectives.[120]

The Supreme Court, in *Alexander v Choate,* affirmed that "agency regulations designed to implement the purposes of Title VI [could be used to redress] actions having an unjustifiable disparate impact on minorities." [121] The Court went on to find that Federal agencies had the power to determine "what sorts of disparate impacts upon minorities constituted significant social problems, and were readily enough remediable, to warrant altering the practices of the Federal grantees that had produced those impacts.''[122]

While many environmental laws, regulations, policies, and decisions are neutral on their face, they can still produce unintentional discriminatory effects that violate Title VI. For this reason, EGLE's "Title VI obligation is layered upon its separate, but related obligations under the

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[116] 40 CFR 7.30.
[117] 40 CFR 7.35(b).
[118] 40 CFR § 7.35, *supra* note 109.
[119] See, e.g. , Maricopa Cty., 915 F. Supp. 2d at 1079 (disparate impact violation based on national origin properly alleged where recipient "failed to develop and implement policies and practices to ensure [limited English proficient] Latino inmates have equal access to jail services" and discriminatory conduct of detention officers was facilitated by " broad, unfettered discretion and lack of training and oversight" resulting in denial of access to important services).
[120] 40 CFR § 7.35, *supra* note 109.
[121] Alexander v. Choate, 469 U.S. 287 (1985), , JUSTIA LAW , https://supreme.justia.com/cases/federal/us/469/287/ (last visited Jul 2, 2020). Reading the holding in Guardians Association v. Civil Service Commission, 463 U.S. 582, 103 S. Ct. 3221, 77 L. Ed. 2d 866 (1983)(see also Guardians Ass'n, 463 U.S. at, 584 n.2(White, J.); id. at 623 n.15 (Marshall, J.); id. at 642–45 (Stevens, Brennan, Blackmun, JJ.).
[122] *Id.*

Federal or state environmental laws governing its environmental permitting program."[123] Therefore, the mere fact that a state agency such as EGLE can demonstrate their actions comply with relevant federal and state environmental laws "does not constitute per se compliance with Title VI."[124]

i.) Permitting Decisions Under Title VI

Similarly, the "question of whether or not individual facility operators are in violation of [environmental laws] is distinct from whether the permitting agencies' decision to grant permits to the operators had a discriminatory impact on the affected communities."[125] The fact that EGLE does not select the site in a license application does not relieve it of the responsibility of ensuring that its actions in issuing licenses for such facilities do not have a discriminatory effect.[126] Within the context of Title VI, the issuance of a license by EGLE or any other recipient of EPA funding is the "necessary act that allows the operation of a source that could give rise to adverse disparate effects on individuals."[127] To operate, the owners of a facility must both "comply with local zoning requirements" and "obtain the appropriate environmental permit." [128]An EPA funding recipient's operation of a licensing program is independent of local government zoning activities.

ii.) Discriminatory Effects Analysis

For complaints pursuing an administrative investigation based on the discriminatory effects standard in EPA's Title VI Regulations the agency must determine whether a facially neutral policy or practice resulted in an "unjustified adverse disparate impact."[129] A four-step analysis is used to determine whether a state agency's decision had a discriminatory effect:[130]

1) Identify the specific policy at issue[131]

2) Establish adversity/ harm[132]

3) Establish disparity[133]

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[123] F.R. 65, No. 124. 39691. (2000)
[124] Id. at 39690.
[125] Californians v. United States EPA, 2018 U.S. Dist. LEXIS 56105, *35
[126] F.R. 65, No. 124. 39691. (2000)
[127] Id.
[128] Id.
[129] Environmental Protection Agency, Draft Title VI Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs, 65 Fed. Reg. 39,650 (June 27, 2000) (Appendix E)
[130] Elements of a Title VI disparate impact claim are like the analysis of cases decided under Title VII. *N.Y. Urban League, Inc. v. New York*, 71 F.3d 1031, 1036 (2d Cir. 1995) (Codified in Title VII at 42 U.S.C. § 2000e–2(k).)
[131] *Texas Dep't of Hour. & Cmty. Affairs v. Inclusive Communities*, 135 S. Ct. 2507, 2523 (2015). "a disparate-impact claim that relies on a statistical disparity must fail if the plaintiff cannot point to a defendant's policy or policies causing that disparity."
[132] E.g., *S. Camden Citizens in Action v. N.J. Dep'tof Envtl. Prot.*, 145 F. Supp. 2d 446, 487 *opinion modified and supplemented*, 145 F. Supp. 2d 505 (D.N.J.) (discussing the methods used to "evaluate the 'adversity' of the impact" and considering whether the impacts at issue were "sufficiently adverse" to establish a prima facie case), *rev'd on other grounds*, 274 F.3d 771 (3d Cir. 2001).
[133] *Tsombanidis v. W. Haven Fire Dep't*, 352 F.3d 565, 576–77 (2d Cir. 2003).

4) Establish causation.[134]

Where the evidence sufficiently meets the standards of the four-part test, the complainants have sufficiently established a "prima facie case:" a finding must be in their favor, provided their evidence is not sufficiently rebutted by the other party. Once a prima facie case is established, the burden shifts to the agency, which must then produce a "substantial legitimate justification" for the challenged policy or practice.[135] Not every reason is legally sufficient to rebut a prima facie case.[136] The explanation of its reason must be clear and reasonably specific.[137] To be a "substantial legitimate justification," it must also be demonstrably related to a significant, legitimate goal.[138] The agency's interest in policy implementation must then be weighed against the substantial public interest in preventing discrimination.[139]

A finding of a "substantial legitimate justification" for its policy is not in itself exculpatory. Instead, the agency must then determine if there are "less discriminatory alternatives."[140] Where the evidence shows that "less discriminatory alternatives" exist, the policy must be found to violate Title VI, even where the agency demonstrates a "substantial legitimate justification" for its discriminatory actions.[141]

"It is possible to have a violation of Title VI or EPA's Title VI regulations based solely on discrimination in the procedural aspects of the permitting process (e.g., public hearings, translations of documents) without a finding of discrimination in the substantive outcome of that process (e.g., discriminatory human health or environmental effects). Likewise, it is possible to have a violation due to discriminatory human health or environmental effects without the presence of discrimination in the public participation process."[142]

The EPA has noted that Title VI concerns are often raised by communities that "believe they are suffering from adverse effects caused by multiple sources."[143] For such communities, filing a Title VI complaint about a license issued to a specific facility "is a way to focus attention on the

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[134] *Flores v. Arizona*, 48 F.Supp. 2d 937, 952 (D. Ariz. 1999)
[135] *N.Y. Urban League*, 71 F.3d at 1036, *Powell v. Ridge*, 189 F.3d 387, 394 (3d Cir. 1999) (citing *Georgia State Conf*., 775 F.2d at 1417)
[136] *NAACP v Med. Ctr., Inc.*, 657 F.2d 1322, 1350 (3d Cir. 1981) (en banc) ("The content of the rebuttal or justification evidence cannot be determined in the abstract. It must be related to the precise impacts suggested by the plaintiffs' evidence.")
[137] See *Texas Dep't of Cnty, Affairs v. Burdine*, 450 U.S. 248, 254-55, 258 (1981).
[138] *Georgia State Conf. v. Georgia*, 775 F.2d 1403, 1417 (11th Cir. 1985). ("Substantial legitimate justification" in a disparate impact case, is similar to the Title VII employment concept of" "business necessity," which in that context requires a showing that the policy or practice in question is demonstrably related to a significant, legitimate employment goal.)
[139] *Gashi v. Grubb & Ellis Property Management Servs*., 801 F. Supp. 2d 12, 16 (D. Conn. 2011)(citing *Huntington Branch, NAACP v. Town of Huntington*, 844 F.2d 929, 937 (2d Cir. 1988),*aff'd*, 488 U.S. 15 (1988) ("After the defendant presents a legitimate justification, the court must weigh the defendant's justification against the degree of adverse effect shown by the plaintiff.")
[140] *Elston v. Talladega Cty. Bd. of Educ.*, 997 F.2d 1394, 1407-1413; *Georgia State Conf.*, 775 F.2d at 1417.
[141] See, e.g., *Coalition of Concerned Citizens Against I-670 v. Damian*, 608 F. Supp. 110, 127 (S.D. Ohio 1984). (conducting a thorough review of alternative sites for highway or other methods, such as light rail or public transportation)
[142] Environmental Protection Agency, Draft Title VI Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs, 65 Fed. Reg. 39,650 (June 27, 2000)
[143] Id.

cumulative impacts."[144] As such, a Title VI analysis should include an analysis of cumulative impact, which is an assessment of the total exposure to multiple environmental stressors, including exposures originating from numerous sources.[145]

A finding of a violation of Title VI and EPA's implementing regulations must be supported only by the lowest legal standard of proof, a mere preponderance of the evidence.[146] If the facts alleged are found to be more than 50% likely to be true, even by the slightest infinitesimal amount, a finding of discrimination must be made.

IV. Title VI Complaints

EGLE has discriminated on the basis of national origin a number of times during the course of its consideration of the license modification regarding U.S. Ecology in violation of 40 C.F.R. § 7.30 and 40 C.F.R. § 7.35.(b).

Additionally, the Complainants believe that EGLE's decision to issue the license modification requested for the U.S. Ecology North facility, which allows a significant expansion of the Facility's storage and treatment capacity in a low-income community of color that is already the host community for another commercial hazardous waste facility and a number of other industrial sources, amounts to discrimination of the basis of race, color, and national origin in violation of 40 C.F.R. § 7.30 and 40 C.F.R. § 7.35(b).

Lastly, the Complainants believe that EGLE's regulations and policies that govern the licensing process for commercial hazardous waste facilities are discriminatory on the basis of race, color, and national origin, as these regulations and policies have led to the disproportionate siting of commercial hazardous waste facilities in low-income communities of color.

A. EGLE discriminated on the basis of national origin by failing to identify limited English proficient persons living nearby the U.S. Ecology North facility and by initially failing to identify limited English proficient persons living near the Facility and by failing to provide adequate translation and interpretation services at its community meeting held on March 28, 2019 in violation of 40 C.F.R. Part 7.

EGLE is prohibited from administering any program or activity in a manner that has the effect of subjecting individuals to discrimination on the basis of national origin.[147] Additionally, Executive Order 13166 requires the EPA to ensure that recipients of federal funds, such as EGLE, provide meaningful access to limited English proficient persons.[148] To this end, in 2004, the EPA published policy guidance that "suggests a general framework that EPA-assisted

[144] Id.
[145] Id.
[146] *In Re Genesee Power Station.* Complaint No. 01R-94-R5. Environmental Protection Agency (2017). https://www.documentcloud.org/documents/3410925-FINAL-Letter-to-Genesee-Case-Complainant-Father.html.
[147] 40 CFR 7.35(b)
[148] 40 CFR 7.35(b)

programs and activities may use to provide meaningful access to LEP persons."[149] This guidance specifies that EGLE must take "reasonable steps to ensure meaningful access to their programs and activities by LEP persons."[150] What amounts to "reasonable steps" is dependent on a number of factors, including the number of LEP persons served, the frequency with which LEP individuals come into contact with the program, the nature and importance of the program, activity, or service, and the resources available to the department.[151]

The prohibition against discrimination on the basis of national origin contained in the EPA's Title VI regulations is closely related to the requirements described in Executive Order 13166. In *Lau v. Nichols,* the United States Supreme Court interpreted regulations promulgated by the Department of Health, Education, and Welfare, including a regulation similar to that of the EPA, to prohibit conduct that has a disproportionate effect on limited English proficient persons.[152] Additionally, the Court has noted that where an inability to speak and understand the English language exclude individuals from effectively participating in a federally-supported program, the department in charge of administering that program must take "affirmative steps to rectify the language deficiency" in order to ensure its program is open and available to all individuals.[153]

EGLE regulations require any person that desires to expand or enlarge their facility's previously authorized design capacity or area of a treatment, storage, or disposal facility first to obtain an operating license.[154] Before making a decision, EGLE must provide the public with a meaningful opportunity to provide input. Specifically, EGLE must do the following:

- Provide notice within a reasonable period that an application for the license has been submitted to EGLE;[155]
- Assess the need, on a case-by-case basis, for an information repository;[156]
- Before making a final decision on a major license modification or operating license application, prepare a draft major license modification and fact sheet;[157]
- Publish a public notice that a draft major license modification has been prepared and allow at least 60 days for public comment;[158]
- Hold a public hearing and provide at least 30 days' notice prior to the public hearing;[159]

These robust public participation requirements are meant to ensure that all people, but particularly those that live nearby a hazardous waste facility, are engaged in the licensing process from when the application for the license is submitted to when EGLE makes its final decision.

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[149] Environmental Protection Agency, Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons, 69 FR 35602, https://www.govinfo.gov/content/pkg/FR-2004-06-25/pdf/04-14464.pdf.
[150] Id.
[151] Id.
[152] *Lau v. Nichols,* 414 U.S. 563 (1974).
[153] *Lau v. Nichols,* 414 U.S. 563, 568 (1980); *Fullilove v. Klutznick,* 448 U.S. 448, 479 (1980).
[154] Mich. Admin. Code R. 299.9501
[155] Mich. Admin. Code, R. 299.9511(3).
[156] Mich. Admin. Code, R. 299.9511(5).
[157] Mich. Admin. Code, R. 299.9511(7).
[158] Mich. Admin. Code, R. 299.9511(7).
[159] Mich. Admin. Code, R. 299.9511(e); Mich. Admin. Code, R. 299.9514.

They are required by the 1995 RCRA expanded public participation rule, which was meant "to promote EPA objectives for 'early and often' public involvement."[160]

In this case, U.S. Ecology submitted a revised license application, which proposed the significant expansion of the Facility's storage and treatment capacity, on March 4, 2013.[161] After receiving the application, EGLE held a public comment period from July 15, 2015, through October 12, 2015, and held a public hearing on August 18, 2015, at the Hamtramck Public Library.[162] However, before opening the public comment period and hosting the public hearing, EGLE failed to assess demographic information to determine if there were limited English proficient persons living nearby U.S. Ecology North. Unfortunately, as discussed in more detail in Section I above, there are a significant number of limited English proficient persons in this community. Specifically, of the 110,982 individuals living with 3 miles of the Facility, 13,246, or approximately 12%, speak English less than "very well."[163] This far exceeds Michigan's limited English proficient population, which is approximately 2% statewide. One need not go far from the U.S. Ecology North facility to identify a dense community with many limited English proficient persons. The Facility is located approximately 1,600 feet from the Masjid Mu'ath Bin Jabal, which is a mosque and a charter school. The mosque is the focal point for the surrounding neighborhood, which is almost entirely made up of Yemeni-Americans many of whom are limited in their English proficiency.

EGLE's failure to identify the sizeable limited English proficient community that lives near U.S. Ecology North essentially foreclosed such individuals from meaningfully participating early in the licensing process as required by RCRA and Michigan's corresponding laws and regulations. As previously mentioned, the EPA's Title VI regulations required EGLE to take affirmative steps to identify limited English proficient persons and to provide such persons with the appropriate translation and interpretation services. This requirement is particularly important in the context of hazardous waste facility licensing, considering the emphasis RCRA places upon requiring state agencies to engage early and often with the public.

As noted above, EGLE was required to provide public notice was the license application was received from U.S. Ecology. To the Complainants' knowledge, this notice was never translated by EGLE into any languages other than English. Additionally, EGLE did make the decision to provide a public information repository, but no translated notice alerting limited English proficient speakers to the availability of this repository was ever created. Lastly, EGLE provided no translated notice regarding either the 2015 public comment period or public hearing, provided no translated documents at the public hearing, and made no interpretation services available at the public hearing.

It was not until the Great Lakes Environmental Law Center sent a letter to EGLE on June 7, 2018, that the Department even became aware of the large limited English proficient community

[160] United States EPA, Public Involvement in Environmental Permits: A Reference Guide, EPA-500-R-00-007, at 2-27, Aug. 2000.
[161] Michigan Department of Environment, Great Lakes, and Energy, Materials Management Division, Fact Sheet, Jan. 2020.
[162] Id.
[163] U.S. Census Data, Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over (2015 American Community Survey 5-Year Estimates)

living nearby U.S. Ecology North. In this letter, the Great Lakes Environmental Law Center highlighted the large number of limited English proficient persons, noted that EGLE had not provided and translation or interpretation services to this community in violation of the EPA's Title VI regulations, and urged EGLE to re-open the public comment process, host an additional public hearing, and provide translation and interpretation services to non-English speakers. Initially, EGLE refused this request. It was not until the Great Lakes Environmental Law Center sent an additional letter to EGLE on July 23, 2018, signed by hundreds of Bengali and Yemeni-Americans reiterating its concerns that EGLE agreed to the requests, including re-opening the public comment period and hosting a local public meeting with translation and interpretation services.

After agreeing to re-open the public comment period and host another public hearing, EGLE staff met with community members to discuss EGLE's plan for meaningfully engaging non-English speakers at the community meeting and during the public comment period. After this meeting, EGLE re-opened the public comment period from February 22, 2019, to April 12, 2019, and held its second public meeting on March 28, 2019.

The Complainants raise two specific complaints regarding the EPA's Title VI Regulations and its prohibition against discrimination on the basis of national origin.

First, EGLE excluded limited English proficient persons from participating in the public engagement process required by RCRA and Michigan's corresponding laws and regulations from the date EGLE received the license application on March 4, 2013, until it re-opened the public comment period and hosted an additional public meeting with translation and interpretation services in early 2019 in violation of Title VI. The EPA's Title VI Regulations prohibit conduct that has a disproportionate effect on limited English proficient persons.[164] To satisfy its Title VI obligations and to avoid discrimination based on national origin, EGLE was required to take "affirmative steps to rectify the language deficiency."[165] EGLE plainly failed in meeting this obligation from 2013 through 2019. EGLE failed to conduct any demographic analysis to identify the large community of limited English proficient individuals living nearby U.S. Ecology North, including the large Yemeni-American community that lived just to the west of the Facility. Even when this issue was brought to the attention of EGLE by the June 7, 2018 letter from the Great Lakes Environmental Law Center, it still initially refused to provide any opportunity for limited English proficient individuals to provide input regarding the U.S. Ecology North licensing decision. It was not until a follow-up letter was sent by the Great Lakes Environmental Law Center that EGLE committed to addressing the issue. It is also clear that EGLE's failure to meet its Title VI obligations it owed to limited English proficient persons from 2013 until early 2019 subjected such persons to harm. Limited English proficient persons living nearby U.S. Ecology were left in the dark about a major change in operations at a large, commercial hazardous waste storage and treatment facility in their neighborhood for six years. As such, limited English proficient persons were given less time to review the relevant fact sheets and proposed license terms, which are required by law, and were only allowed to provide input late in the licensing process long after English speakers had already had their say.

[164] *Lau v. Nichols,* 414 U.S. 563 (1974).
[165] Id.

Second, the Complainants believe that the translation and interpretation services provided by EGLE at its public meeting regarding the U.S. Ecology North license on March 28, 2019, were insufficient to ensure limited English proficient persons could meaningfully participate at the meeting in violation of Title VI. At this meeting, EGLE experienced significant technical difficulties, which limited its ability to communicated with limited English proficient individuals. Additionally, many attendees complained that the translation services provided by EGLE were not adequate. Based on these shortcomings, EGLE hindered the ability of affected individuals and their respective communities to meaningfully engage in the agency's decision making process regarding the issuance of a hazardous waste license allowing U.S. Ecology North to expand its storage and treatment operations significantly in their community. In so doing, EGLE failed to satisfy its obligations to provide sufficient translation and interpretation services to limited English proficient persons under the EPA's Title VI regulations.

B. EGLE' s decision to approve the license modification regarding the U.S. Ecology North, which permits a significant expansion of the Facility's hazardous waste storage and treatment capacity, violates 40 C.F.R. Part 7

As noted by the EPA, compliance with environmental laws does not constitute per se compliance with Title VI.[166] Commonly, permits and licenses, such as the one issued to U.S. Ecology North, simply control pollution rather than prevent it. Additionally, nothing in RCRA or Part 111 of the Michigan Natural Resources and Environmental Protection Act required EGLE to consider cumulative effects of multiple sources located in a concentrated area. Nor does either statute require EGLE to consider whether its decision to approve issue a license to a hazardous waste storage and treatment facility like U.S. Ecology North will have a disproportionate impact on persons of a particular race, color, or national origin. To put it simply, EGLE's Title VI obligation "exists in addition to the Federal or state environmental laws governing its permitting program."[167]

The EPA's Title VI regulations prohibit EGLE from using "criteria or methods of administering its program which have the effect of subjecting individuals to discrimination because of their race, color, [or] national origin."[168] As applied to the permitting or licensing process, EGLE may not issue a license that is either intentionally discriminatory or that have a discriminatory effect based on race, color, or national origin.[169] In determining whether its decision to allow U.S. Ecology North to significantly expand its hazardous waste storage and treatment operations had a discriminatory intent, EGLE must determine whether that decision resulted in an unjustified adverse disparate impact. As discussed in Section 1, U.S. Ecology North is in a community that is disproportionately people of color when compared to state and national averages. Additionally. this community is uniquely impacted by several adverse impacts associated with the operation of a hazardous waste storage and treatment facility such as U.S. Ecology North.

1. Environmental Impacts Associated with U.S. Ecology North

[166] U.S. EPA Title VI Guidance, at 39,680.
[167] Id.
[168] 40 CFR 7.35(b)
[169] EPA Title VI Guidance, 39,668.

The operation of a large hazardous waste storage and treatment facility in the middle of a dense urban neighborhood creates numerous adverse environmental impacts that have potentially severe consequences for the health of nearby families. These include: impacts associated with the spill or release of hazardous wastes; chemical reactions associated with the improper storage or treatment of hazardous wastes which can result in catastrophic events, such as explosions; the discharge of excessive levels of hazardous substances into the sewer system, and; air quality impacts due to fugitive and stack emissions from the Facility, emissions from diesel trucks carrying shipments of hazardous waste to and from the Facility, and odors from the Facility.

i. Hazardous Waste Storage and Treatment

The first and most obvious adverse impact is the ever-present risks associated with spills or releases of hazardous waste at or near the Facility, as well as chemical reactions associated with improper hazardous waste storage or treatment, which can result in catastrophic events, such as explosions.

In the past, there have been violations of hazardous waste storage requirements at U.S. Ecology North. Specifically, during a 2018 inspection, EGLE staff observed that acid wastes and base wastes in Bays 4, 5, and 7 were stored "literally side by side."[170] This practice violated the Facility's permit, which required acid and base wastes not to be stored together and to always be separated by at least one row.[171]

The proper storage and handling of hazardous waste is of utmost importance. In 2018, there was an explosion at a U.S. Ecology hazardous waste facility in Grand View, Idaho due to the improper storage of hazardous waste.[172] According to U.S. Ecology, the cause of the explosion was a chemical reaction between water, magnesium, and the presence of non-conforming materials that was not a part of the facility's approved waste stream.[173] The explosion killed one employee at the facility and hospitalized three others.[174] While catastrophic, if a similar type of explosion event were to occur at U.S. Ecology North, the consequences would be more severe. The U.S. Ecology facility in Grand View, Idaho is in an isolated area, with no surrounding land uses. As previously detailed in Section I, U.S. Ecology North is in a dense urban neighborhood.

Communities of color and low-income are generally more vulnerable to the impact of disasters than people with a higher socioeconomic status.[175] As a result, communities such as those that exist around U.S. Ecology North may experience more material losses and greater damage to or

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[170] James Day, Michigan Department of Environment, Great Lakes, and Energy, Post Inspection Letter to US Ecology, August 7, 2018. https://drive.google.com/drive/u/0/folders/12XLrHGb4KdEivjAjfTWiIC6Bj1MW_Bc7.
[171] Id.
[172] Environmental Protection Agency, US Ecology Waste Disposal Facility Explosion. https://response.epa.gov/site/site_profile.aspx?site_id=14031.
[173] US Ecology releases investigation report into deadly 2018 Grand View facility explosion, KIVI (2019), https://www.kivitv.com/news/us-ecology-releases-investigation-report-into-deadly-2018-grand-view-facility-explosion (last visited Jul 24, 2020).
[174] One person killed, three hospitalized in explosion at US Ecology site near Grand View, KIVI (2018), https://www.kivitv.com/news/explosion-at-us-ecology-idaho-site-near-grand-view (last visited Jul 24, 2020).
[175] Substance Abuse and Mental Health Services Administration, Greater Impact: How Disasters Affect People of Low Socioeconomic Status (2017), https://www.samhsa.gov/sites/default/files/dtac/srb-low-ses_2.pdf.

destruction of their homes due to living in homes with lower quality construction.[176] As noted in the following subsections, residents living nearby U.S. Ecology North are already dealing with such impacts. Additionally, studies have found people living in low-income communities of color may lack access to the transportation resources needed to comply with evacuation orders.[177] One study of residents impacted by Hurricane Katrina found that Black residents were less likely to have evacuated before the hurricane, and more likely to have been unable to do so.[178] To put it simply, emergency response procedures for low-income communities of color, such as those that surround U.S. Ecology North, must take these unique vulnerabilities into account.

The license approved by EGLE fails to address the unique risks that exist when a large hazardous waste facility exists in a low-income community of color.

First, the Waste Analysis Plan is insufficient to ensure that hazardous wastes received at U.S. Ecology North are accepted, stored, and treated in the manner necessary to avoid a catastrophic event such as that which occurred at U.S. Ecology's Idaho facility. The Waste Analysis Plan describes the process by which waste is received, identified, and stored. For all incoming shipments of hazardous waste, the Waste Analysis Plan requires personnel at U.S. Ecology North to review the shipping manifest to ensure that it is accurate and complete and to inspect the containers visually.[179] The license also requires U.S. Ecology to perform a fingerprint screening analysis for at least 10% of the containers from each approved waste stream per shipment to confirm that it matches the waste profile information and analytical results provided by the generator.[180] Similarly, U.S. Ecology's Idaho facility that experienced an explosion due to inadequate hazardous waste screening and analysis procedures had an identical requirement in its RCRA permit.[181] As noted by the EPA, performing a fingerprinting analysis for 10% of the incoming hazardous waste containers of each waste stream shipped from each generator is the *minimum* to provide a sufficient waste profile knowledge to ensure accurate waste representation.[182] Hazardous wastes are often a complex mixture of chemicals, and to define them requires a laboratory analysis.[183] Waste generators may not maintain adequate records of the components of their waste streams.[184] Given the U.S. Ecology North is located in a densely populated high-risk community, the Complainants believe more robust requirements regarding fingerprinting for incoming waste shipments are necessary.

Second, once hazardous waste shipments are received, the license lacks adequate waste compatibility analysis requirements to ensure that wastes combined into a single container for

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[176] Id.
[177] Id.
[178] Thiede, B. C., & Brown, D. L. (2013). Hurricane Katrina: Who Stayed and Why? *Population Research and Policy Review*, *32*(6), 803-824. https://doi.org/10.1007/s11113-013-9302-9
[179] Condition 3.A(2)(a); (b).
[180] Id.
[181] Idaho Department of Environmental Quality, US Ecology Idaho, Inc. Waste Analysis Plan (2019), https://www.deq.idaho.gov/media/60178892/us-ecology-site-b-grand-view-att2.pdf.
[182] Environmental Protection Agency, *Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Wastes* (2015), https://www.epa.gov/sites/production/files/2015-04/documents/tsdf-wap-guide-final.pdf
[183] U.S. EPA, *A Method for Determining the Compatibility of Hazardous Waste,* EPA 600/2/-80-076 (Apr. 1980), available at https://www.epa.gov/sites/production/files/2016-03/documents/compat-haz-waste.pdf
[184] Id.

storage or in a single tank for treatment will not cause a violent reaction. The license only requires a pre-treatment analysis to ensure aggregated wastes are amenable to the same treatment and will destroy, remove, or stabilize constituents.[185] It does not specify what the pre-treatment analysis must entail, nor does it require any pretreatment analysis before wastes are transferred from one container to another.

Third, the contingency plan is inadequate, given the unique vulnerabilities of the surrounding community. Neither the Facility's license nor the 54-page Contingency Plan makes any reference as to how personnel at the Facility will notify or engage with nearby residents in the case of an emergency.

Fourth, while EGLE stated that all hazardous waste handling operations must take place on areas paved with concrete or asphalt, this requirement is not reflected anywhere in the license. Even if it were, it is unclear why this reasoning alone would be a sufficient basis for waiving the soil monitoring requirement. There are clearly areas at U.S. Ecology North that are unpaved. These areas could become contaminated, and the contaminated soil may be transported off-site through any number of means, including wind dispersal.

In addition to concerns regarding the U.S. Ecology North license, the Complainants are also concerned about the cumulative impacts associated with living in close proximity to two commercial hazardous waste facilities. U.S. Ecology South exists at 1923 Fredrick Street in Detroit, which is less than 2 miles away from U.S. Ecology North. While U.S. Ecology North has received 13 violation notices regarding violations of hazardous waste storage and treatment regulations over the previous five years, U.S. Ecology South has received 10. Additionally, U.S. Ecology South has been cited 17 times by EGLE's Air Quality Division for violations of Mich. Admin. Code, R. 336.1901(b) due to odor violations. As discussed below, residents living nearby U.S. Ecology North have complained about odors as well.

Obviously, the storage and treatment of hazardous wastes is an extremely dangerous activity. The nine-fold increase in U.S. Ecology North's hazardous waste storage capacity will mean there will be more hazardous waste allowed to come to the Facility, which increases the risks for nearby community members. Given the Facility's location in a dense, low-income community of color, the Complainants believe that the license fails to protect nearby residents from the adverse impacts associated with the Facility. Specifically, the Waste Analysis Plan, Contingency Plan, and lack of soil monitoring will subject to the residents living nearby the Facility to adverse impacts. As detailed in Section I above, this community is overwhelmingly a community of color, making this adverse impact disproportionate for the purposes of 40 C.F.R. Part 7.

Additionally, the Complainants believe that allowing U.S. Ecology North to expand when it is located less than 2 miles from U.S. Ecology South exacerbates these adverse environmental impacts. EGLE did not consider the cumulative impacts of its licensing decision regarding U.S. Ecology North. This analysis is required by 40 C.F.R. Part 7.

ii. Discharge of Hazardous Substances into the Sewer System

[185] Permit Condition 3.A(2)(f)

Another common adverse impact is exceedances of discharge limits required by the Facility's Industrial Pretreatment Program permit. Nearby residents can be exposed to effluent discharges with excessive levels of hazardous substances during sewer backup events. Such an event occurred in 2013 when a resident on Badger Street in Detroit alerted government officials with the City of Detroit that a "yellow foamy substance" was coming out of a storm sewer across from U.S. Ecology.[186] Additionally, nearby residents have expressed concerns that the sewage that, from time to time, backs up into their basement contains hazardous substances discharged by U.S. Ecology North into the sewer system. Rufus McWilliams, who lives near U.S. Ecology North, has noted that during periods of heavy rain, sewage backs up into the basements of homes. When this occurs, the entire house would have an "egg-like odor."[187] Other residents have also experienced sewer backups into their basement during periods of heavy rain and have complained about such backups causing a "chemical" odor.[188]

Over the past ten years, U.S. Ecology has exceeded discharge limits in its Industrial Pretreatment Program permit over 150 times.[189] Recently, these violations have included the following:

- Exceedance of arsenic limit on September 28, 2016;
- Exceedance of cobalt/copper limit on November 10, 2016;
- Exceedance of biochemical oxygen demand limit on December 12, 2016;
- Exceedance of titanium limit on February 27, 2016;
- Exceedance of titanium limit on March 24, 2017;
- Exceedance of copper limit on April 28, 2017;
- Exceedance of copper limit on June 6, 2017;
- Exceedance of phosphorus and silver limits on August 14, 2017;
- Exceedance of copper limit on June 6, 2018.

In addition to the hazardous substances regulated by U.S. Ecology North's Industrial Pretreatment Permit, recent reports have also indicated that elevated levels of PFAS have been discharged into the sewer system. When nearby residents experience basement backups, they are exposed to these extremely hazardous substances in their homes, which may cause significant adverse health effects.

iii. Odors, Dust, and Truck Traffic

The expansion of U.S. Ecology North's operations will also cause increased air quality and odor issues for nearby residents. Residents in the nearby area, including Ms. McWilliams, have

[186] Complaint/PEAS Incident Report Form, Office of Waste Management and Radiological Protection, PEAS No. 13-116, Sept. 10, 2013 (Appendix F)
[187] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Deposition of Rufus McWilliams, at 38 (Appendix G)
[188] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Deposition of Dernise Jackson, at 30 (Appendix H)
[189] Keith Matheny, *US Ecology's permit violations anger Detroit neighbors*, DETROIT FREE PRESS, https://www.freep.com/story/news/local/michigan/detroit/2016/11/16/usecology-hazardous-waste-detroit-sewer/89963514/ (last visited Jul 24, 2020).

claimed that U.S. Ecology North is the source of rotten egg and chemical odors.[190] Other residents have reported experiencing similar odors and have stated that the fumes and odors make them feel "tense, nauseated, and always on edge," as well as suffering a "loss of appetite."[191] Additionally, residents have reported that they have stopped using the outdoor area of their residence, and have stopped inviting people to their residence due to the odors.[192]

These odors described by residents are clear violations of Mich. Admin. Code, R. 336.1901, which prohibits any person from causing or permitting the emission of an air contaminant in amounts that cause, either alone or in reaction with other air contaminants, injurious effects to human health or safety, or unreasonable interference with the comfortable enjoyment of life and property.[193] The community surrounding the U.S. Ecology North facility is disproportionately composed of people of color when compared to the state and national averages. As such, this adverse effect is having a disproportionately negative impact on people of color in violation of 40 C.F.R. Part 7.

In addition to odors, nearby residents have also frequently complained about the dust that inundates their neighborhood. Ms. McWilliams has stated that the dust in her neighborhood can cause breathing issues and aggravate her asthma.[194] It also prevents her from opening the doors and windows of her home.[195] Due to the level of dust in her neighborhood, Ms. McWilliam's doctor recommended that she get an air filtration system for her home.[196] An analysis of dust fall samples taken in the neighborhood has revealed that the total suspended solids deposited in the area is between 559 and 958 milligrams per square meter per month.[197] These levels are well above standards utilized to measure nuisance standards, such as Australia's standard of 120 milligrams per square meter per month, and are likely causing significant adverse health impacts.[198]

U.S. Ecology North, along with several other industrial facilities in the area, are causing this dust problem. The entrance to U.S. Ecology North is on Sherwood Street which is partially unpaved. Additionally, portions of U.S. Ecology North are unpaved. When large trucks and heavy equipment travel on unpaved roads or portions of the Facility, they can cause spikes in fugitive dust, which can have serious adverse impacts on the health of nearby residents. Additionally, the diesel exhaust emissions from trucks traveling to and from U.S. Ecology North and other

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[190] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Deposition of Pamela Williams, at 80 (Appendix I)
[191] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Psychological Evaluation of Darin Fowler (Appendix J)
[192] Id. at 5.
[193] Mich. Admin. Code, R 336.1901.
[194] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Psychological Evaluation of Pamela McWilliams, at 3 (Appendix K)
[195] Id.
[196] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Deposition of Pamela Williams, at 58 (Appendix I)
[197] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Preliminary Report for Deposition Sampling, Noise Monitoring, and Air Sampling Program for the Neighborhood in the Vicinity of the I-94 Industrial Park, at 14 (Appendix L)
[198] The State of Queensland, *Particles & Air pollutants* (2017), https://www.qld.gov.au/environment/pollution/monitoring/air/air-pollution/pollutants/particles (last visited Jul 24, 2020).

industrial sites in the area can have significant health effects on nearby residents, including acute effects such as asthma attacks and chronic effects such as lung cancer.[199] The expansion of U.S. Ecology North's storage capacity will result in more diesel trucks going to and from the Facility. This, along with the trucks going to and from other nearby industrial facilities such as Universal Logistics, have a significant adverse effect on the health of nearby residents.

2. Property Values

In addition to the environmental risks that people living nearby U.S. Ecology North are exposed to daily, they have also experienced a decrease in their property values due to their homes being located nearby a large commercial hazardous waste facility. Several studies have found that hazardous waste sites have a statistically significant adverse impact on neighboring property values. One study performed a meta-analysis of 46 North American studies issued from 1971 to 2008 and concluded that all classes of waste sites affect real estate prices.[200] Another study surveyed suburban Boston households and estimated that distance from a hazardous waste disposal site is valued at $330 to $495 per mile per year.[201] The negative impact that a hazardous waste facility may have on property values can extend as far as five and three-quarter miles from the facility itself.[202]

Overall, peer-reviewed research indicates that proximity to hazardous waste sites reduces residential property values by anywhere from 2 to 12%.[203] An expert reviewing U.S. Ecology North's impact on nearby property values has opined that it is "reasonable to expect" that the reports of the frequency and severity of U.S. Ecology North's environmental violations would have a "corresponding, deleterious impact on residential property values in the neighborhood."[204] Additionally, the expert noted that if EGLE were to grant U.S. Ecology regulatory approval to expand its Facility, that it could potentially reduce home values in the neighborhood by as much as 12% from their pre-2015 levels.[205]

Of course, U.S. Ecology North does not exist in isolation. Residents living in the neighborhood are also confronted with adverse effects from several other industrial facilities, including Strong Steel, Universal Logistics, and Flex-N-Gate. Living nearby each of these industrial facilities further depresses nearby residents' property values. An expert that surveyed the full, cumulative impact of these industrial activities on property values opined that nearby residents experienced as much as a 60% permanent reduction in their property value.[206] The estimated property value

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[199] Environmental Protection Agency, Health Assessment Document for Diesel Engine Exhaust (2002). https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=29060.
[200] John B. Braden, Xia Feng, DooHwan Won, *Waste Sites and Property Values: A Meta-Analysis, Environmental and Resource Economics*, 50, 175-201 (2011).
[201] V. Kerry Smith & William H. Desvousges, *The Value of Avoiding a LULU: Hazardous Waste Disposal Sites*, 68 Rev. Econ. Stat. 293, 298 (1986).
[202] Gerald E. Smolen & Gary Moore, *Economic Effects of Hazardous Waste Landfills on Surrounding Real Estate Values in Toledo, Ohio*, Ohio State Univ. Center for Real Estate Education and Research, Feb. 1991.
[203] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Robert A Simons LLC Brief regarding Property Values (Appendix M)
[204] Id.
[205] Id.
[206] Id.

reduction for Ms. McWilliams was 40%.[207] Potential adverse cumulative impacts from stressors must be considered pursuant to the EPA's Title VI Regulations.[208] An assessment of cumulative impacts requires consideration of total exposure from multiple environmental stressors, including exposures originating from multiple sources.[209]

The estimated impacts on property values of nearby residents that are attributable to U.S. Ecology North and other nearby industrial facilities is significant. Additionally, these impacts are being disproportionately borne by a community that is disproportionately composed of people of color when compared to state and national averages. As such, this adverse effect is having a disproportionate impact on people of color in violation of 40 C.F.R. Part 7.

3. Psychological Effects

As detailed in the subsections A and B above, U.S. Ecology North and the other nearby industrial facilities regularly cause a number of significant adverse effects that impact the lives of the people living in nearby neighborhoods. Living in a community with elevated levels of air pollution, odors, the potential for catastrophic events due to the mishandling of hazardous waste, truck traffic, loud noises, and destructive vibrations has taken a severe mental toll on residents. A licensed psychologist has interviewed several residents living nearby U.S. Ecology North to examine whether they have been subjected to emotional injuries due to the adverse effects experienced by residents from the environmental impacts discussed above.

The psychologist's evaluation of Ms. McWilliams is particularly telling. In her home of 33 years, Ms. McWilliams has been subjected to "[e]xplosions and vibrations that make her home shake" and that have even shaken shingles off the roof and cracked windows.[210] The fumes, odors, and dust from nearby industrial facilities, including U.S. Ecology North, have caused breathing difficulties and aggravate her asthma. On particularly bad days, Ms. McWilliams has resorted to wearing a mask in her home.[211] She frequently cannot open her doors and windows because of the dust, fumes, odors, and air pollution.[212] The noises, heavy truck traffic, and explosions are described as "disturbing and frightening" and interrupt her sleep.[213] Ms. McWilliams has expressed that she loves her home and her neighbors and would prefer to remain in her home, but only if the industrial pollution is stopped.[214] The psychologist concluded that Ms. McWilliams had suffered "significant emotional anguish from exposure to, experiencing and witnessing the environmental toxins emanating from industrial complexes, Strong Steel, Flex-N-Gate, Universal Logistics, and U.S. Ecology North."[215] Additionally, the psychologist concluded that these adverse and cumulative environmental effects "has created and/or exacerbated feelings of

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[207] Id.
[208] Environmental Protection Agency, Draft Title VI Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs, 65 Fed. Reg. 39,650 (June 27, 2000), available at https://www.govinfo.gov/content/pkg/FR-2000-06-27/pdf/00-15673.pdf.
[209] Id.
[210] *Mosetta Jackson et al. v. U.S. Ecology et al.,* Case No. 18-000608-CZ, Wayne County Cir. Court, Psychological Evaluation of Pamela McWilliams, at 2 (Appendix K)
[211] Id.
[212] Id.
[213] Id.
[214] Id.
[215] Id.

anxiety, despair, futility, and vulnerability" in a manner that is "pervasive, profound, long-lasting, and affect every aspect of her life."[216] These conclusions were consistent with other examinations performed by the psychologist of other residents of the same neighborhood. The psychologist concluded that while the details of each account were unique to each person, "the collective concerns are unanimous and overwhelming" and that each person living in the neighborhood felt inundated by adverse effects associated with U.S. Ecology North, and other nearby industrial facilities, but also "powerless to protect themselves."[217]

The EPA's Title VI regulations exist to ensure that communities such as this are not forced to continue to bear the brunt of the adverse environmental effects that result from industrial facilities such as U.S. Ecology North. The EPA has expressly stated that 40 C.F.R. Part 7 requires consideration of cumulative impacts from other nearby sources that may be exacerbating the adverse effects that are being disproportionately borne by communities of color.

Instead of addressing these issues in the licensing process, EGLE callously dismissed them. Instead of carefully considering who lives nearby U.S. Ecology North and whether they may be owed protection under Title VI as a community of color, it stated that the community has transitioned from residential to industrial. Additionally, when hundreds of residents raised concerns regarding the inequity that is inherent in EGLE's pattern of predominantly approving the siting of hazardous waste facilities in communities of color, it simply responded that it "does not have the authority to consider whether the facility is needed or wanted when deciding whether to issue or deny a license."[218] However, this mischaracterizes and dismisses many residents and the Complainants' true concern, which is EGLE's approval of hazardous waste facility licenses that allows for the disproportionate siting of such facilities in communities of color is discriminatory in violation of Title VI. This dismissal exacerbates the psychological harm described in this subsection, as it contributes to the feeling of powerlessness of the residents.

The psychological effects experienced by residents that are attributable to U.S. Ecology North and other nearby industrial facilities is significant. Additionally, these impacts are being borne by a community that is disproportionately composed of people of color when compared to state and national averages. As such, this adverse effect is having a disproportionate impact on people of color in violation of 40 C.F.R. Part 7.

C. EGLE's failure to adopt policies or regulations requiring the consideration of racial and economic demographic information in hazardous waste licensing decisions has established a pattern or practice of discrimination on the basis of race, color, and national origin.

The issues discussed above regarding U.S. Ecology North are not unique. Other Michiganders across the state that live nearby commercial hazardous waste facilities are dealing with similar issues. Below is a summary of environmental hazards associated with other commercial hazardous waste facilities across the state:

[216] Id.
[217] Id.
[218] Responsiveness Summary at 2.

- Petro-Chem Processing Group of Nortru LLC
    - Releases from the facility have caused a variety of contamination issues, including PFAS and VOC contamination.
    - Have received 27 notices of violation in the past 5 years from EGLE pursuant to Part 111
- Republic Industrial and Energy Solutions
    - Have received 24 notices of violation in the past 5 years from EGLE pursuant to Part 111
- Drug and Laboratory Disposal, Inc.
    - Have received 11 notices of violation in the past 5 years from EGLE pursuant to Part 111
- Gage Products Co.
    - Have received 18 notices of violation in the past 5 years from EGLE pursuant to Part 111
- Michigan Disposal
    - Have received 3 notices of violation in the past 5 years from EGLE pursuant to Part 111
- Wayne Disposal
    - Have received 6 notices of violation in the past 5 years from EGLE pursuant to Part 111

Additionally, the communities nearby the other commercial hazardous waste facilities have another thing in common: they are disproportionately composed of people of color.

As discussed in Section I, Michigan is the worst state in the nation regarding the disproportionate siting of commercial hazardous waste facilities in communities of color. This is partially because EGLE does not consider demographic information regarding the surrounding community when making its licensing decisions pursuant to Part 111 of the Michigan Natural Resources and Environmental Protection Act. EGLE's failure to consider demographic information is made worse by the fact that MCL 324.11110 required the Department to update its state hazardous waste management plan to include criteria for ensuring that there was a reasonable geographic distribution of hazardous waste treatment, storage, and disposal facilities.[219] These criteria were required to include a consideration of demography, environmental factors, and public health factors for determining acceptable locations for hazardous waste facilities.[220] Once the updated state hazardous waste management plan was adopted, EGLE was statutorily required to not issue a license for a hazardous waste facility unless it decided that the issuance of the license would be consistent with the plan.[221] However, EGLE never amended its state hazardous waste management plan, and in failing to do so, never incorporated the consideration of demographics into its consideration determining acceptable locations for hazardous waste facilities. As a result, commercial hazardous waste facilities have continued to be disproportionately located in communities of color throughout Michigan. Now, in the case of U.S. Ecology North, the adverse effects associated with these facilities is being compounded by the increasing intensity of its operations.

The Complainants believe EGLE's failure to amend its state hazardous waste management plan to require the consideration of demography, environmental factor, and public health factors amounts to intentional discrimination in violation of 42 U.S.C. § 2000d. Claims of intentional

[219] MCL 324.11110(2)(f).
[220] Id.
[221] MCL 324.11115.

discrimination can be based on facially neutral laws or practices.[222] To prove intentional discrimination by a facially neutral policy, it must be shown that the policy was promulgated or reaffirmed because of, not merely in spite of, its adverse impact.[223] Determining whether an invidious discriminatory purpose was a motivating factor demands a sensitive inquiry into such circumstantial and direct evidence of intent as may be available.[224] The impact of a neutral policy or practice can be used as evidence of intentional discrimination.[225]

Here, the failure to adopt criteria that would require the consideration of a location's demography in determining whether a proposed location is an acceptable location for a hazardous waste facility has led to Michigan being the worst state in the country regarding the disproportionate siting of hazardous waste facilities in communities of color. This is a part of EGLE's unfortunately poor history regarding environmental justice, which has included a rare determination by the EPA that EGLE has engaged in discriminatory treatment of African Americans in the public participation process,[226] as well as the Flint Water Crisis. If this criterion were adopted, it would impact EGLE's licensing decisions, such as the one it made regarding U.S. Ecology North, because such decisions must be consistent with the plan.[227]

The Michigan legislature clearly mandated EGLE to update the state hazardous waste plan in 1990 to ensure a "reasonable geographic distribution" of hazardous waste facilities throughout the state.[228] The Michigan legislature also clearly mandated EGLE to include the consideration of demography as one of its criteria for ensuring such a reasonable geographic distribution of such facilities.[229] EGLE failed to make such amendments to the state hazardous waste management plan, and as such never considered such criteria in its decision to issue a license to U.S. Ecology North that authorizes a significant expansion of its hazardous waste storage and treatment operations despite the surrounding community being disproportionately composed of people of color. In instances where a state agency continues implementing a policy that fails to prevent discrimination prohibited by Title VI despite previous commitments to do so, such a policy may amount to intentional discrimination.[230] That is the case here. EGLE was required to update its state hazardous waste plan 30 years ago to ensure the reasonable geographic distribution of hazardous waste facilities and was required to include demography as one of the criteria. Its blatant failure to do so has had a severe impact on communities of color throughout Michigan and amounts to intentional discrimination in violation of 40 C.F.R. Part 7.

V. **Less Discriminatory Alternatives**

[222] *See, Personnel Adm'r of Massachusetts v. Feeney,* 442 U.S. 256, 272 (1979).
[223] *Homer v. Kentucky High School Athletic Ass'n,* 43 F.3d 265, 276 (6th Cir. 1994).
[224] *Village of Arlington Heights v. Metro. Hous. Dev. Corp.,* 429 U.S. 252, 266 (1977).
[225] *Almendares v. Palmer,* 284 F.Supp.2d 799, 805 (N.D. Ohio, 2003)
[226] U.S. EPA, Determinations Regarding EPA File No. 01R-94-R5, Jan. 19, 2017, available at https://www.epa.gov/sites/production/files/2017-01/documents/final-genesee-complaint-letter-to-director-grether-1-19-2017.pdf
[227] MCL 324.11115.
[228] MCL 324.11110(2)(f).
[229] Id.
[230] *Almendares v. Palmer,* 284 F.Supp.2d 799, 807 (N.D. Ohio, 2003)

Throughout the licensing process for U.S. Ecology North, EGLE consistently refused to accept recommendations that would have led to outcomes that were less discriminatory.

- Regarding the identification of limited English proficient persons, EGLE could have proactively identified this community upon receiving U.S. Ecology North's license application, and immediately developed plans to provide adequate translation and interpretation services. While EGLE recently published a draft Limited English Proficiency Plan, this Plan still relies on EGLE's various divisions and district offices to identify proper methods for identifying LEP individuals and for determining the need for public involvement and public engagement.[231] As such, this remains a serious and ongoing issue.
- EGLE could have considered the cumulative effects that result from the operation of numerous industrial sites, including two commercial hazardous waste facilities, in making its determination as to whether the license U.S. Ecology North adequately protects the public health.
- EGLE could have amended its state hazardous waste management plan to provide for the reasonable geographic distribution of hazardous waste facilities as required by law, which could include the consideration of demographic information in the context of licensing decisions for commercial hazardous waste facilities.

VI. **Jurisdiction**

Section 601 of Title VI of the Civil Rights Act of 1964, 42 U.S.C.S. § 2000d et seq., provides that no person shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity covered by Title VI. Congress intended that its policy against discrimination by recipients of Federal assistance be implemented, in part, through administrative rulemaking. EPA has promulgated Title VI regulations that apply to state agencies that are recipients of financial assistance from the EPA.

Title VI specifically defines what amounts to a program or activity. It is defined as "all of the operations…of a department, agency, special purpose district, or other instrumentality of a State or of a local government…any part of which is extended Federal financial assistance.[232] If any part of an entity receives federal funds, the whole entity is covered by Title VI.[233] Additionally, EPA's Title VI regulations define a recipient as "any state… instrumentality of a state…[or] public agency… to which Federal financial assistance is extended directly or through another recipient."[234] EGLE has received millions as recipients of financial assistance from the EPA.[235] Since the year US Ecology submitted its request for a revised license in 2013, over a billion dollars in financial assistance to the agency have been obligated by the EPA. As a recipient of

[231] Michigan Department of Environment, Great Lakes, and Energy, Draft Limited English Proficiency Plan, at 5 (Apr. 6, 2020), available at https://www.epa.gov/sites/production/files/2017-01/documents/final-genesee-complaint-letter-to-director-grether-1-19-2017.pdf
[232] 42 U.S.C. § 2000d-4a.
[233] *Ass'n. of Mex.-Am. Educ. v. California,* 195 F.3d 465, 474-5 (9th Cir. 1999), rev'd in part on other grounds, 231 F.3d 572 (9th Cir. 2000) (en banc)
[234] 40 CFR § 7.25
[235] Spending by Prime Award (Awarding Agency EPA, Recipient Environment Great Lakes and Energy). USASPENDING.GOV, https://usaspending.gov/#/search.

federal financial assistance from the EPA at the time the discrimination occurred, EGLE is subject to the provisions of Title VI.

EGLE Policy and Procedure 09-024 provides that any person or group may submit a complaint alleging discrimination of any kind by EGLE, including discrimination that may constitute a violation of 40 C.F.R. Part 7 or any state or federal statutes or regulations that EGLE enforces.

This Complaint fully complies with all requirements described in EGLE Policy and Procedure 09-024 regarding the submittal of a complaint. It has been submitted in writing via electronic mail and signed by the Complainants' legal counsel. The Complaint provides all of the requisite information. The Grievance Submittal Form (EQP0120) has not been submitted because the form is not available online at the link provided by EGLE.

This Complaint has been filed in response to EGLE's decision to issue a modified license to U.S. Ecology North. The license was issued on January 29, 2020. As such, this Complaint is timely because it was filed within 180 days of the issuance of the license in accordance with EGLE Policy and Procedure 09-024.

This Complaint has also been filed in response to EGLE's failure to update its state hazardous waste management plan to ensure the reasonable geographic distribution of hazardous waste facilities and to require the consideration of demographics in licensing decisions. Such noncompliance, which is having a discriminatory effect on people of color, is ongoing. As such, this Complaint is timely because the nature of the violation is ongoing.

VII. Relief

The Complainants request that EGLE accept this complaint and investigate whether it has committed any acts of unlawful discrimination, including those acts of discrimination alleged in this complaint that may constitute a violation of 40 C.F.R. Part 7, and other state and federal statutes.

Further, the Complainants request that EGLE be brought into compliance with 40 C.F.R. Part 7, and other state and federal statutes. To do so may include, but not be limited to, the following forms of relief:

- Amending the license issued to U.S. Ecology North to adequately address the issues raised herein to ensure local community members are sufficiently protected from the adverse impact;
- Revising the state hazardous waste management plan to stop the disproportionate siting and expansion of commercial hazardous waste facilities in low-income communities of color in accordance with 40 C.F.R. Part 7. Immediately cease granting any licenses to new or existing commercial hazardous waste facilities until such revisions to the state hazardous waste management plan are complete and in effect;
- Requiring the EGLE Materials Management Division to adopt policies and procedures for the identification of limited English proficient persons and the provision of translation and interpretation services.

In accordance with EGLE Policy 09-024, the Complainants request to engage in an informal resolution process to address the issues raised in this Complaint.

Sincerely,

/s/Nicholas Leonard

Nicholas Leonard
Andrew Bashi
Great Lakes Environmental Law Center
4444 Second Avenue
Detroit, MI 48201
313-782-3372
nicholas.leonard@glelc.org
andrew.bashi@glelc.org

/s/Alice Jennings

Alice Jennings
Edwards & Jennings PC
65 Cadillac Square, #48/2710
Detroit, MI 48226
313-961-5000
ajennings@edwardsjennings.com

Attorneys for Michigan Environmental Justice Coalition, Sierra Club, Sharon Buttry, Mark Covington, Kheir Arabi, Pamela McWilliams, and Irene Sinclair

July 27, 2020

Communities of color are dumping grounds for toxic waste in Michigan

By Steve Neavling on Wed, Sep 16, 2020 at 1:00 am

Steve Neavling
U.S. Ecology facility on Detroit's east side received permission to expand its storage of toxic waste ninefold.

This is the second in a series of stories exploring environmental racism in Michigan. You can read the first part here.

The dust and stench of rotten eggs and chemicals are so nauseating that Pamela McWilliams often dons a mask and shuts the windows of her home on Detroit's east side.

The asthmatic 57-year-old has trouble sleeping at night because of heavy truck traffic coming to and from nearby industrial plants. She and other neighbors say they're sometimes aroused awake by explosions and vibrations that have shaken the shingles off McWilliams' roof and cracked her windows. The value of her home has plummeted, and her brother moved away because "he couldn't take it anymore," she tells *Metro Times*.

Her predominantly Black, lower-income neighborhood at the border of Hamtramck is one of the most polluted in the state, with elevated levels of particulate matter, ozone and other harmful emissions known to cause serious health problems, including asthma, impaired lung function, cardiovascular disease, and birth defects.

"I like fresh air. I don't want to be a prisoner in my house. I should be able to sit on my front porch, but it's stressful," McWilliams tells *Metro Times*. "It's sad and crazy. It's a nightmare."

She and thousands of others live near a slim industrial zone of pollution-spewing factories that make their neighborhoods one of the most polluted in the state. Now they're bracing for more dust, pollution, and noise after losing a years-long battle to prevent the expansion of U.S. Ecology at 6520 Georgia St., a hazardous-waste processing plant with a troubling record of environmental violations. In January, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) approved U.S. Ecology's permit to increase its storage of toxic waste ninefold. The plant has permission to treat 144,000 gallons of toxic and industrial chemicals per day, including arsenic, cyanide, mercury, PCBs, and PFAS, that are dumped into the city's sewer system. Over the past 10 years, U.S. Ecology has been cited more than 150 times for releasing excessive amounts of toxic chemicals into the sewer system, according to Great Lake Water Authority records.

In Michigan, communities of color serve as virtual dumping grounds for toxic waste. Seven of the eight hazardous-waste facilities that are permitted to accept offsite waste in Michigan are in disproportionately Black, lower-income communities in metro Detroit. Of the residents living within a three-mile radius of the plants, 65% are people of color. By comparison, people of color make up 25% of the state's population.

The same disparities existed in 2007, when the United Church of Christ found that Michigan led the country with the most disproportionate number of people of color living near hazardous waste facilities. The report, the authors wrote, "signals clear evidence of racism where toxic waste sites are located and the way government responds to toxic contamination emergencies in people of color communities."

"For decades, companies such as U.S. Ecology have sought out communities of color for their hazardous waste facilities because they were seen as the path of least resistance for places to store, treat, and dispose of our society's poisons," Michelle Martinez,

director of the Michigan Environmental Justice Coalition, said in a statement. "We need EGLE to step up and protect us from environmental racism, or this legacy will continue for another several decades."

The state's eight hazardous-waste facilities have been cited hundreds of times for violations ranging from contaminating water sources with toxic spills to fires and explosions caused by mishandling chemicals.

EGLE acknowledges the racial disparities and says it's committed to addressing them.

"We recognize these concentrations of polluting facilities in underserved neighborhoods of color are environmental justice issues," EGLE spokesman Nick Assendelft tells *Metro Times*. "We are working to address those issues within the confines of the law and our authority."

In early 2019, Michigan Gov. Gretchen Whitmer created the Office of the Environmental Justice Public Advocate to explore ways to combat environmental racism. Whitmer followed up in January with the creation of the state's first Environmental Justice Advisory Council.

Steve Neavling
U.S. Ecology building at 6520 Georgia St., which borders densely populated neighbors.

Battleground for racial justice

U.S. Ecology's expansion has become the battleground in the fight against environmental racism in Michigan. In August, the Great Lakes Environmental Law Center filed a 55-page complaint with EGLE, arguing that it violated the civil rights of residents living near the facility just north of I-94. A coalition of environmental groups argues the state has a legal responsibility under the Civil Rights Act of 1964 and the EPA's Title VI regulations to ensure communities of color aren't disproportionately subjected to environmental hazards.

"To put it simply, Michigan's low-income communities of color are disproportionately bearing the burden of living near large commercial hazardous waste facilities," Nick Leonard, executive director of the law center, wrote in the complaint, on behalf of residents, the Sierra Club, and the Michigan Environmental Justice Coalition. "These facilities serve as the dumping ground for hazardous waste that comes from all over the country."

EGLE doesn't disagree.

"Decades of history have brought us to where we are today regarding locations of facilities,"

Assendelft says. "We recognize undoing those decades of injustice will take sustained, long-term commitment to changing laws, practices, and mindsets."

But EGLE has long argued it doesn't have the legal authority to deny a permit to companies as long as they're in compliance with state and federal environmental laws.

"The current siting of these facilities is not part of EGLE's purview," Assendelft says. "As a regulatory agency, we are bound by the laws and regulations that we enforce, which are focused on how these facilities affect the environment and people."

Leonard disagrees, saying federal law clearly requires states to prevent polluters from disproportionately impacting people of color.

"EGLE has a legal obligation ... to ensure that its licensing decisions do not have a discriminatory effect," Leonard says. "Instead of closely examining the proposed license to ensure that it would not have an unjustified adverse disparate impact on the surrounding community, EGLE continued its disappointing legacy of shirking its Title VI obligations to communities of color, which perpetuates the environmental injustice of

commercial hazardous-waste facilities in Michigan being disportionately located in communities of color."

Within a 1.5-mile radius of U.S. Ecology are densely populated neighborhoods, four playgrounds, five parks, seven nursing homes, 11 churches, three mosques, four preschool Head Start programs, three elementary and middle schools, and a high school. Of the more than 10,000 people who live near the plant, about 80% are people of color, and 70% are considered low-income. The residents are predominantly Black, with a sizable population of Yemeni-Americans and Bengali-Americans.

About 1,600 feet from U.S. Ecology is the Masjid Mu'ath Bin Jabal, a mosque and a charter school.

"The mosque is the focal point for the surrounding neighborhood, which is almost entirely made up of Yemeni-Americans, many of whom are limited in their English proficiency," the complaint states.

Sam Alarsi, who has lived near U.S. Ecology since 1988 and is chairman of the Yemeni-American Political Action Committee, says he and his neighbors are uneasy because "a lot of people are getting sick, and we don't know where it's coming from."

"They ignored the community of color and made us feel like we don't exist," Alarsi tells *Metro Times*. "It makes me feel scared, and it makes me feel like my house means nothing to them. We deserve to have a fair life and clean air."

During the public comment period, non-English speakers were not alerted in Arabic to the proposed expansion until late in the process. When the state finally circulated information in Arabic, the translation "didn't make sense," he says.

U.S. Ecology defends its location and tells *Metro Times* that it has been receptive to community concerns and notes the facility recently stopped processing radioactive fracking sludge, known as technologically enhanced, naturally occurring radioactive material (TENORM), when residents spoke out against it.

"U.S. Ecology has facilities across North America with only a handful located near communities of color," says the company's spokesman David Crumrine. "A key priority for us is maintaining open and transparent relationships with regulators and the communities we serve."

U.S. Ecology isn't the only contributor to pollution in the area. Other industrial facilities, including Strong Steel, Universal Logistics, and Flex-N-Gate, help create one of the most hazardous environments in the state. Other industrial buildings are beginning to crop up.

The three-mile residential area surrounding U.S. Ecology scores above the state's 90th percentile for risk of respiratory hazards and cancer risk from air toxins. Residents suffer from disproportionately high rates of asthma, brain damage, cancer, respiratory problems, miscarriages, birth defects, and cognitive impairments.

Steve Neavling
Stuffed animals hanging on a utility pole in a neighborhood near U.S. Ecology.

Dangers of hazardous waste

Hazardous waste is a potentially dangerous byproduct of manufacturing, farming, construction, laboratories, water treatment systems, and other industries. It contains chemicals, heavy metals, radiation, and other materials that may pose a serious risk to people, animals, and the environment. If mishandled, hazardous waste can contaminate the air, water, and soil.

Exposure to hazardous waste can cause severe and irreparable health problems, including cancer, genetic mutations, kidney failure, birth defects, and cognitive impairment, according to the EPA.

Michigan is the second-largest importer of hazardous waste in the United States. In 2017, Michigan imported more than 220,000 tons of hazardous waste, the equivalent weight of eight Statues of Liberty, according to the Environmental Protection Agency. Michigan imported hazardous waste from 44 states and Washington, D.C. Some of the waste came from as far away as the Northern Mariana Islands in the Pacific Ocean, a 7,000-mile trip.

In all, 70% of the waste in Michigan's facilities came from outside the state in 2017. Of that, 94% of it ended up in Wayne County, which has the largest population of people of color in Michigan. The county represents 17.5% of the state's population.

Only 5% of the waste that originated in Michigan was produced inside the counties in which the facilities are located.

In addition to U.S. Ecology, these facilities have permission to accept offsite waste: Wayne Disposal Inc. (Belleville), Michigan Disposal Waste Treatment Plant (Belleville), PSC Environmental Services (Detroit), Gage Products Co. (Ferndale), Drug And Laboratory Disposal, Inc. (Plainwell), and Republic Industrial And Energy Solutions (Romulus).

Many states have adopted laws or policies that would prevent hazardous-waste facilities from being concentrated in Black communities or near densely populated neighborhoods. In Arkansas, hazardous-waste facilities are prohibited from operating within a half mile of any occupied building or home. Florida bars facilities from operating within 1,000 yards of a home and 1,500 yards of any hospital, prison, school, nursing home, day-care facility, stadium, or place of worship.

In New York, hazardous-waste facilities cannot be concentrated in one area and must be equitably distributed. Michigan has a similar law that requires EGLE to ensure "reasonable geographic distribution" of hazardous-waste facilities, but environmental groups say Michigan isn't enforcing it.

Steve Neavling
Thousands of homes, like these, are within a mile of U.S. Ecology.

'Geography is destiny'

It's no coincidence that communities of color are bearing the brunt of dangerous pollution: In the first half of the 20th century, local and federal authorities reinforced racial segregation by creating laws and policies that confined Black people to small, overcrowded, and dilapidated neighborhoods with dire housing conditions, substandard schools, and inadequate city services. In 1947, when African Americans were fleeing the Jim Crow South in droves, less than 9% of the 545,000 housing units in the Detroit area were available to Black people, according to Tom Sugrue's book *The Origins of the Urban Crisis*.

In the name of "urban renewal" in postwar Detroit, many of the Black enclaves were bulldozed and replaced with industrial corridors, where pollution-spewing factories cropped up and to this day pose serious health risks to nearby residents.

"To a great extent in postwar America, geography is destiny," Sugrue wrote.

Black Detroiters suffer from disproportionately high rates of asthma, cancer, brain damage, heart disease, respiratory problems, miscarriages, birth defects, and cognitive impairments — all of which are tied to air pollution. Pollution kills an estimated 650 Detroiters a year, more than twice the number of residents killed by guns annually, according to a study by the University of Michigan School of Public Health.

"The impacts of poor air quality disproportionately fall on poor and minority populations," the researchers wrote in "Working Together to Improve Detroit's Air."

Justin Onwenu, a community organizer for the Sierra Club, says Michigan is at "the epicenter of the fight for environmental justice."

"The Flint Water Crisis, water shutoffs, and poor air quality are discussed, but many people don't know that the overwhelming majority of hazardous-waste facilities — facilities that process the most toxic chemicals known to man — are located in communities of color and process toxic chemicals from all over the world," Onwenu tells *Metro Times*. "We know this has an impact on everything from health and home values to the ability of schoolchildren to learn in a healthy environment. This is a clear case of environmental injustice that must be addressed with urgency."

EGLE defended the expansion of U.S. Ecology, in part, by saying the "surrounding area has gone from residential to industrial," a claim that residents and environmentalists say dismisses the densely populated neighborhoods.

"This callous statement ignores the history of housing discrimination and slum clearance for industrial activity that turned what was once one of Detroit's few Black enclaves into a community that is disportionately composed of low-income people of color," Leonard wrote in the civil rights complaint.

By comparison, Leonard notes how few people live near the only commercial hazardous-waste facility outside of metro Detroit, Drug and Laboratory Disposal, Inc., in rural Allegan County. More people live within a three-mile radius of U.S. Ecology than those who live within an 11-mile radius of Drug and Laboratory Disposal, which takes in far less waste.

Mark Covington, a lifelong Detroit resident who helped build a coalition to fight U.S. Ecology's expansion, says he's concerned that residents are being squeezed out by industrial buildings.

"They have all this space throughout the state, but they continue to build up in neighborhoods with a lot of people of color," Covington says. "It's like they don't care about us."

A troubling record

U.S. Ecology has dumped an excessive amount of nearly two dozen types of hazardous chemicals or metals into the sewer system, environmental records show. Wastewater sampling found alarmingly high levels of arsenic, mercury, and titanium in the sewer system near U.S. Ecology.

Over the past few years, residents have reported spotting a mysterious yellow foam coming out of storm sewers near the plant.

Environmental groups were alarmed when EGLE allowed U.S. Ecology to discontinue soil and groundwater testing, saying toxic waste can pose a serious health risk for many years.

U.S. Ecology insists it has sufficient safeguards in place to protect nearby residents.

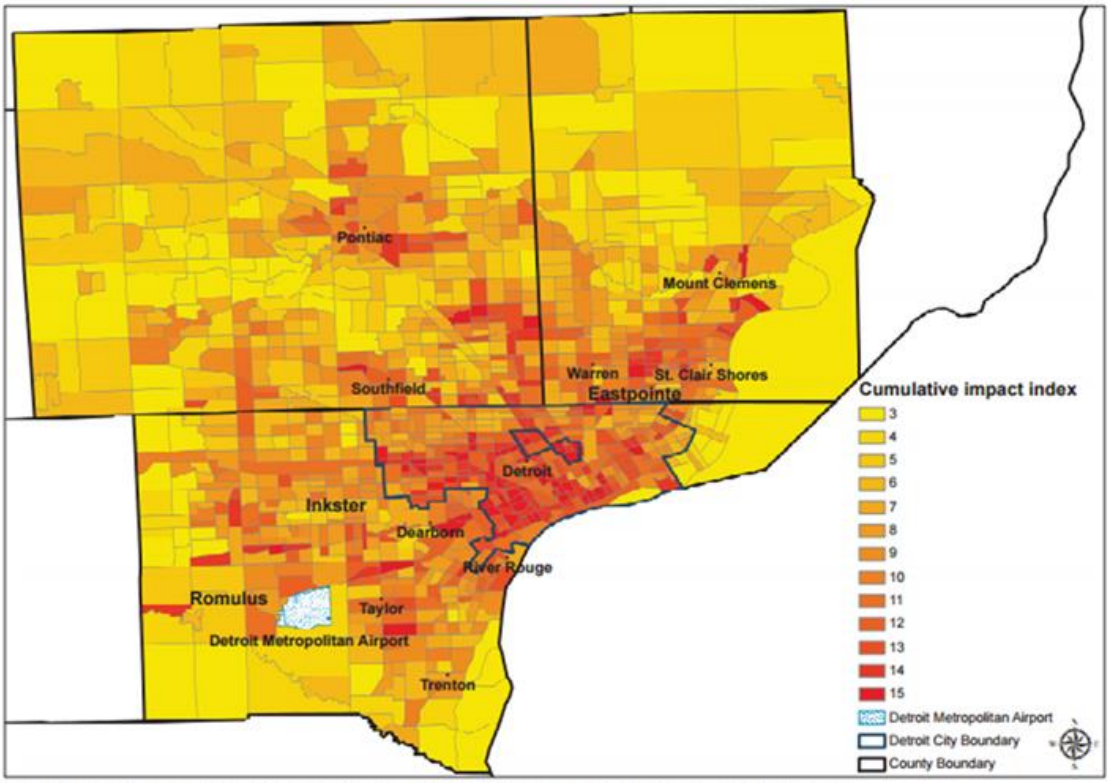
"Since U.S. Ecology acquired the Detroit North location in 2012, we have focused on ensuring safety for the community as we work to provide compliant environmental solutions for the Michigan area," Crumrine says. "Under our management, the facility has had a very good safety and compliance record. We maintain a culture of continuous improvement to ensure this track record is maintained and strengthened over time. Safety is our top priority."

Michigan officials plan to meet soon with a coalition of environmental groups and residents to address the civil rights complaint. In the meantime, officials say they are committed to working toward environmental justice.

"The Office of Environmental Justice is working externally and within state government to collaboratively address challenges that affect communities of color and low income communities," Assendelft says. "We know that this is not easy to accomplish and will not happen overnight; however, we remain committed to working toward achieving environmental justice."

Name: Adrienne Jordan, MPH candidate
Organization: Georgia Street Community Collective
Preceptors: Reverend Sharon Buttry and Diane Weckerle
Date: August 22, 2021

Cumulative Risk in the Detroit Tri-County Area



Cumulative impact polygons (CI) include: residential areas, child care facilities, health care facilities, schools and playgrounds.
Total Cumulative Impact includes: Hazardous Facilities and Land Uses, Exposure and Health Risk and Vulnerabilities

This shows cumulative impact index across Detroit which represents air pollution hazardous land uses and population vulnerabilities across the area. Places with denser populations of people of color are more likely to experience increase exposures to air pollutants and associated health risks and have populations that are susceptible to adverse health effects for example young children and older adults (CAPHE, 2021)

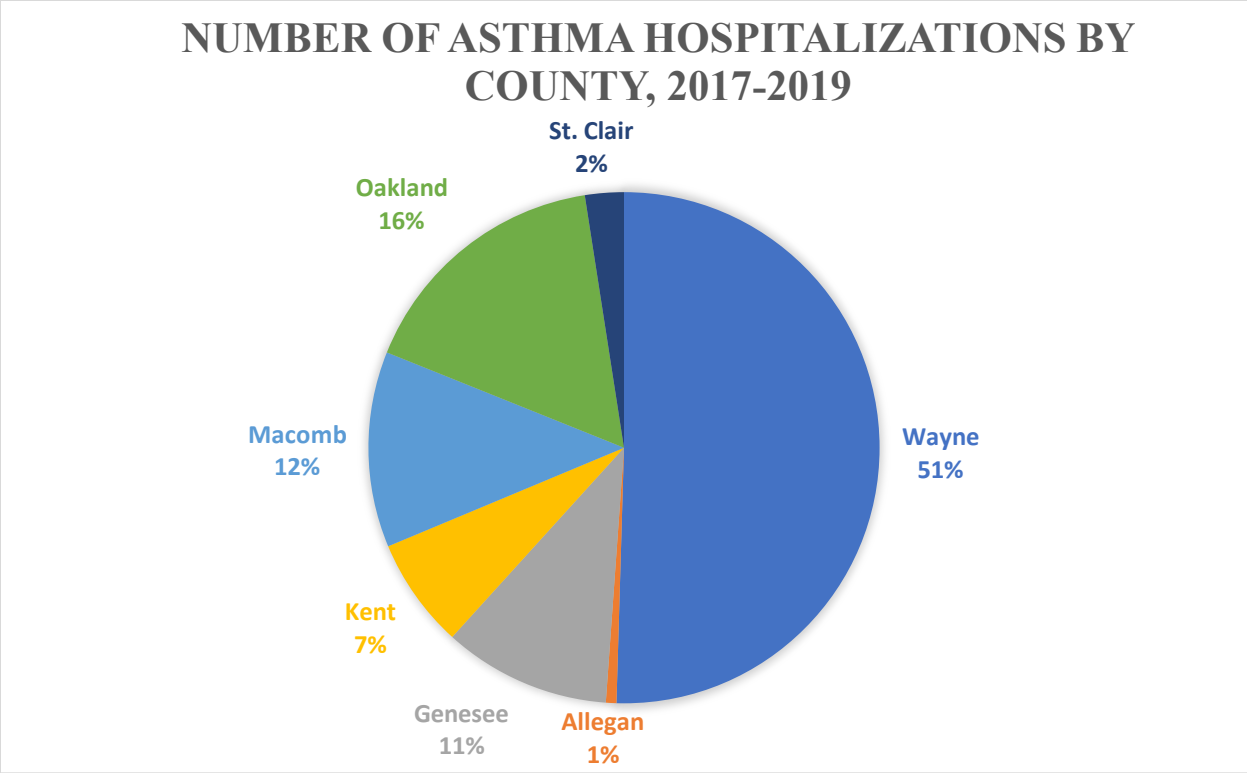


Figure 1: Number of asthma hospitalizations among Michigan counties from 2017-2019. (created by A. Jordan)

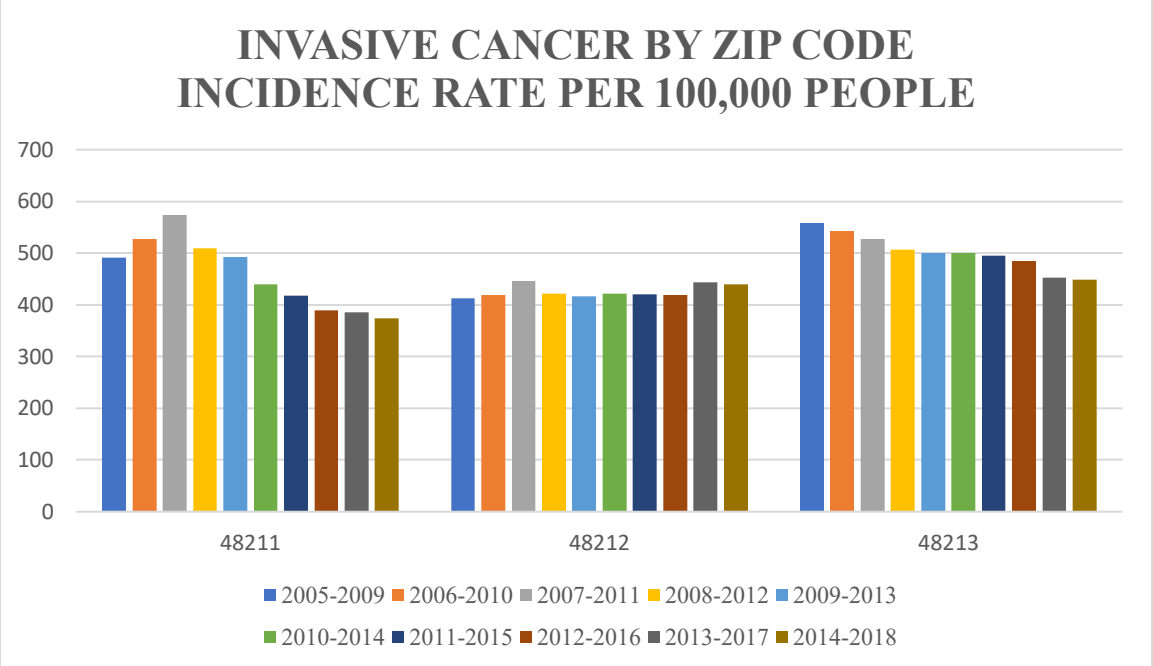


Figure 2: Invasive cancer incidence rate per 100,000 people by Michigan ZIP codes from 2005-2018. (created by A. Jordan)

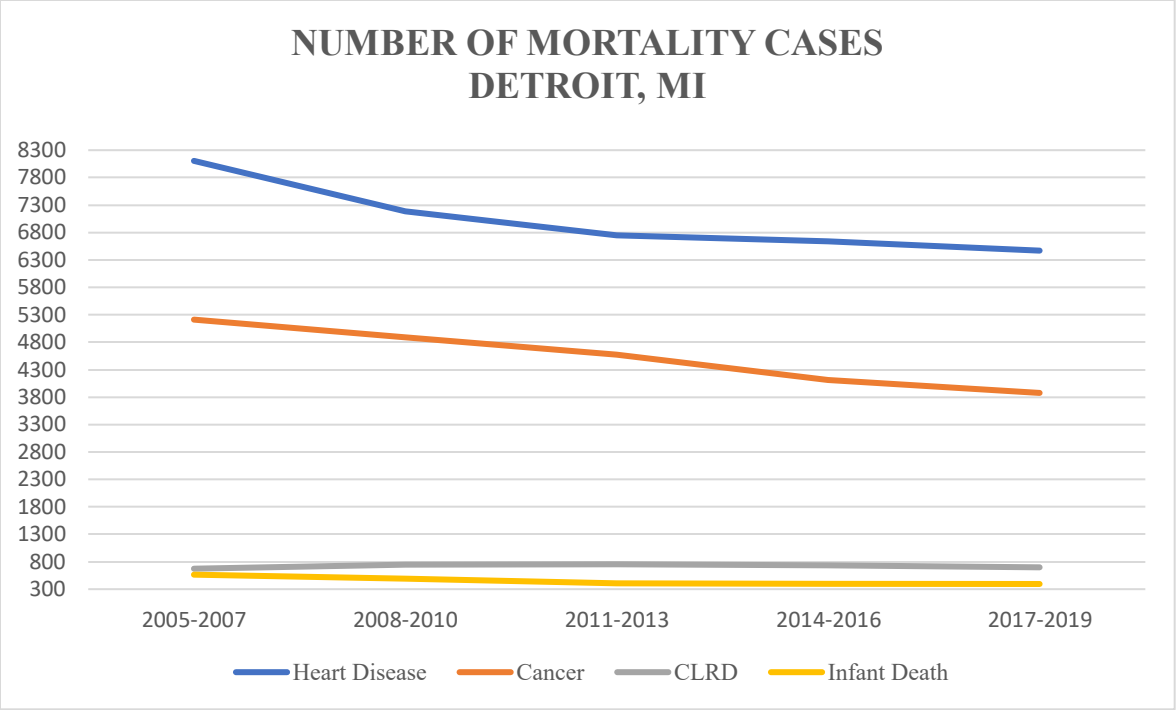


Figure 3: Number of mortality cases among heart disease, cancer, CLRD and infant death in Detroit, Michigan from 2005-2019. Abbreviations: CLRD: chronic lower respiratory disease. (created by A. Jordan)

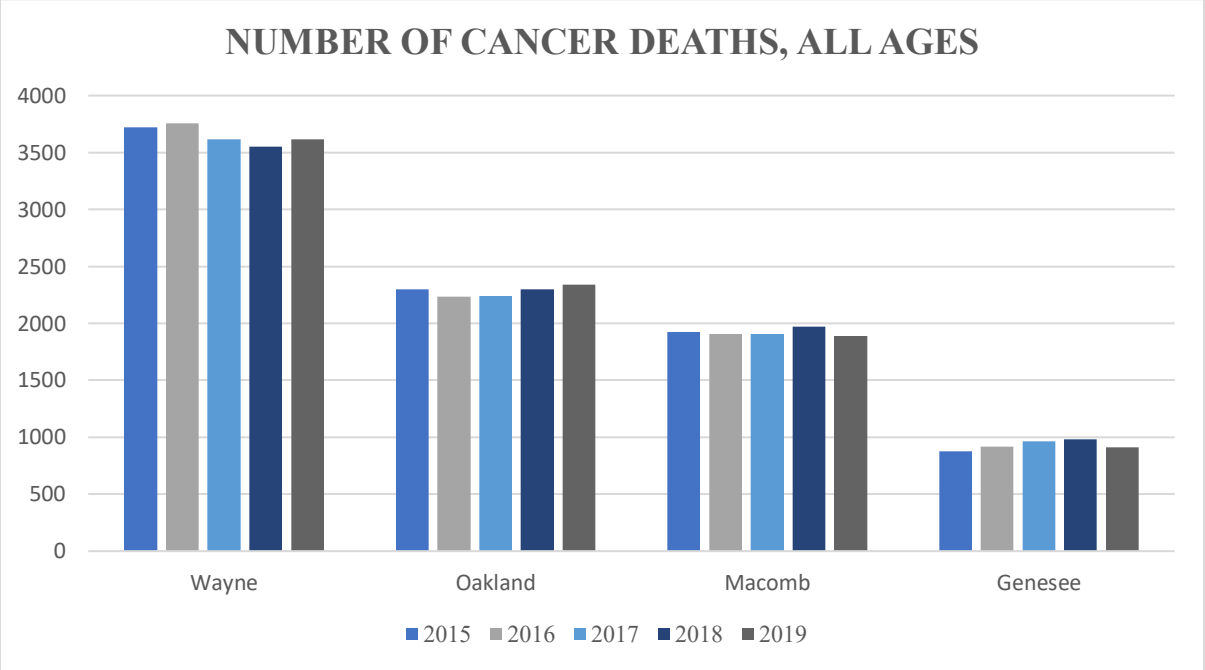


Figure 4: Number of cancer deaths including all ages among Michigan counties from 2015-2019. (created by A. Jordan)

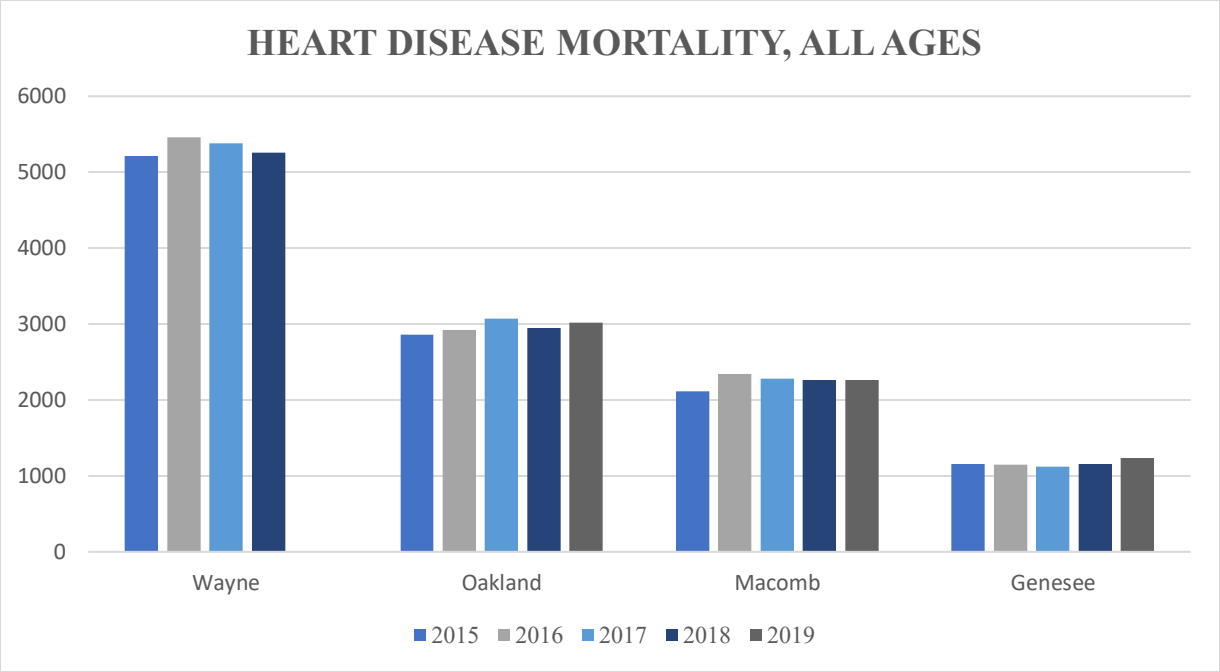


Figure 5: Heart disease mortality cases among Michigan counties from 2015-2019. (created by A. Jordan)

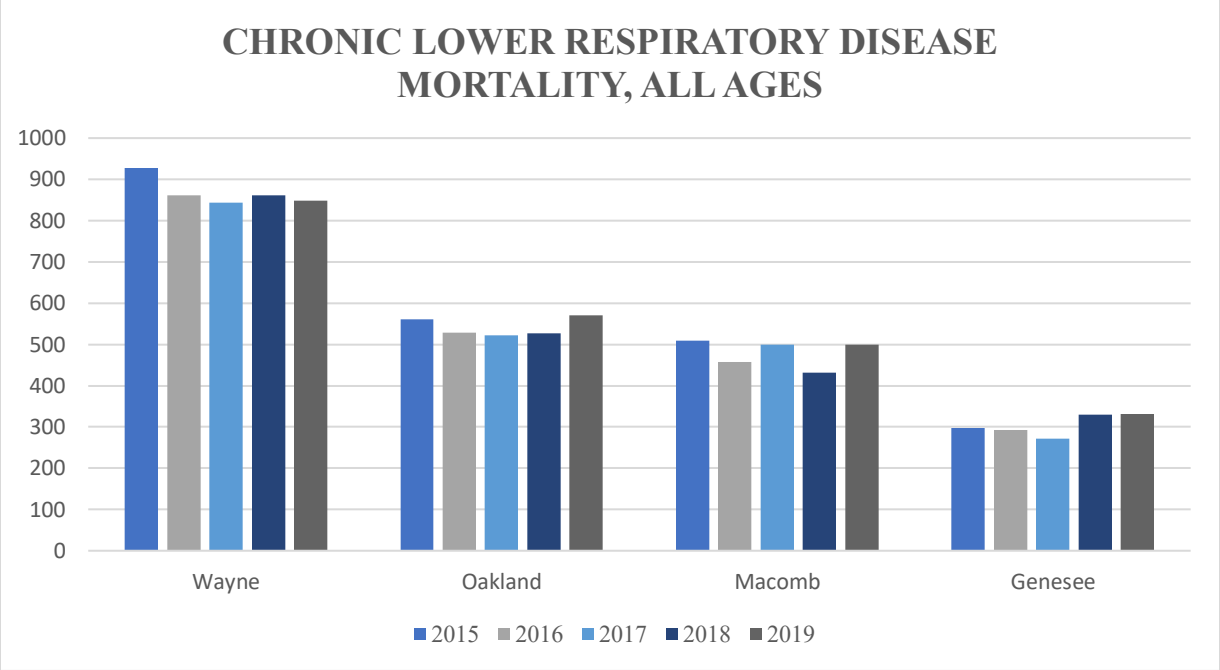


Figure 6: Chronic lower respiratory disease mortality cases including all ages among Michigan counties from 2015-2019. (created by A. Jordan)

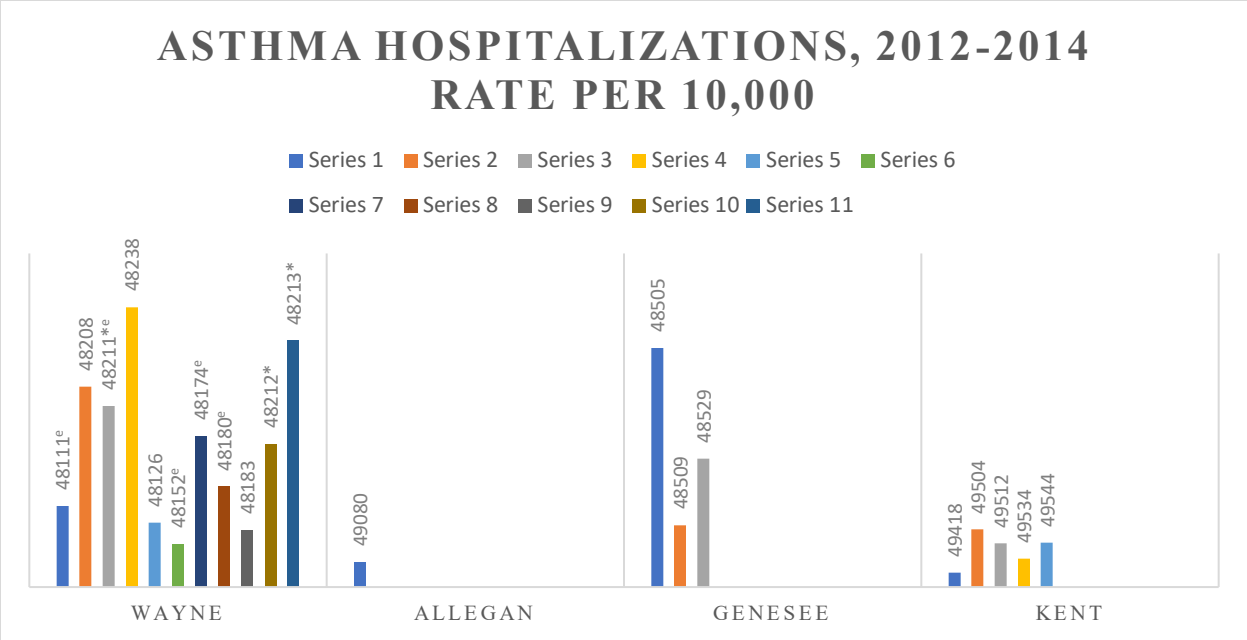


Figure 7: Asthma hospitalizations rate per 10,000 from 2012-2014 among Michigan counties and ZIP codes. (created by A. Jordan)

County	Year	AACM/100T	Lung & Bronchus Cancer AACM/100T	No. of cases	AAR/100T
Wayne	2013-2017	182	50.0		
Allegan	2013-2017 2017-2019	163.4	45.6		
Genesee	2013-2017 2017-2019	180.6	51.3		
Kent	2013-2017 2017-2019	150.3	38.5		
Macomb	2013-2017 2017-2019	173.0	49.7		
Monroe	2013-2017 2017-2019	176.7	50.7		
Oakland	2013-2017 2017-2019	147.4	36.2		
St. Clair	2013-2017 2017-2019	174.9	52.3		
Overall Lung Bronchus	2015 2016			7,839 5,548	62.6 43.8

Table 1: Cancer mortality among Michigan counties from 2013-2019. Abbreviations: AACM: Age-Adjusted Cancer Mortality; T: Thousand; AAR: Age-adjusted Rate. (created by A. Jordan)

Mortality	Year & # of cases				
Condition	2005-2007	2008-2010	2011-2013	2014-2016	2017-2019
Heart Disease	8,105	7183	6750	6641	6469
Chronic Lower Respiratory Disease	673	742	753	735	692
Cancer	5212	4890	4575	4117	3876
Infant Death	564	487	410	397	398

Table 2: Mortality among residents in Detroit, Michigan with heart disease, chronic lower respiratory disease, cancer, and infant death during 2005-2019. (created by A. Jordan)

Condition	Year	Number	IR/100T	Rate/10T	ROH/10T	County	Percent/1H	Rate/1T
48211 Zip code[e]								
Invasive Cancer	2005-2009	180	490.6					
	2006-2010	180	527.8					
	2007-2011	181	574.0					
	2008-2012	161	509.6					
	2009-2013	156	492.4					
	2010-2014	139	439.3					
	2011-2015	135	417.9					
	2012-2016	126	388.8					
	2013-2017	126	385.2					
	2014-2018	122	373.5					
Asthma	2000-2002			37.7—47.3				
	2007-2009				39.58-86.20*			
	2009-2013				30-37			
Preterm Birth[d]	2009-2011	46						
	2014-2018						0.1-10%	
Low Birthweight[w]	2009-2011	39						
	2014-2018						0.1-8.6%	
Infant Mortality	2009-2011	1						
	2014-2018							6.6-14.2%
48212 Zip code[e]								
Invasive Cancer	2005-2009	724	412.3					
	2006-2010	699	418.4					
	2007-2011	704	445.8					
	2008-2012	670	421.6					
	2009-2013	662	416.9					
	2010-2014	669	421.8					
	2011-2015	667	420.8					
	2012-2016	662	418.5					
	2013-2017	699	444.1					

	2014-2018	687	439.5				
Asthma	2000-2002			22.1-37.6			
	2007-2009				24.90-39.58		
	2009-2013				21-29		
Preterm Birth[d]	2009-2011	286					
	2014-2018					0.1-10%	
Low Birthweight[w]	2009-2011	246					
	2014-2018					8.6-12.8%	
Infant Mortality	2009-2011	21					
	2014-2018						6.6-14.2%
48213 Zip code[e]							
Invasive Cancer	2005-2009	862	558.1				
	2006-2010	810	542.6				
	2007-2011	759	526.7				
	2008-2012	734	507.2				
	2009-2013	727	500.0				
	2010-2014	729	500.7				
	2011-2015	723	495.5				
	2012-2016	710	484.8				
	2013-2017	659	452.8				
	2014-2018	651	449.2				
Asthma	2000-2002			59.6-70.0			
	2007-2009				39.58-86.20*		
	2009-2013				57-71		
Preterm Birth[d]	2009-2011	249					
	2014-2018					14-60%	
Low Birthweight[w]	2009-2011	217					
	2014-2018					12.8-60%	
Infant Mortality	2009-2011	18					
	2014-2018						6.6-14.2%
48180 Zip code[e]							
Asthma	2007-2009				10.22-24.90		
Preterm Birth[d]	2009-2011	338					
Low Birthweight[w]	2009-2011	262					
Infant Mortality	2009-2011	26					
48111 Zip code[e]							
Asthma	2007-2009				24.90-39.58		
Preterm Birth[d]	2009-2011	217					
Low	2009-2011	148					

Birthweight[w]			
Infant Mortality	2009-2011	13	
48220 Zip code			
Asthma	2007-2009		10.22-24.90
Preterm Birth[d]	2009-2011	137	
Low Birthweight[w]	2009-2011	83	
Infant Mortality	2009-2011	7	

Table 3: Rates of invasive cancer, asthma, preterm birth, low birthweight, and infant mortality by ZIP code in Michigan. Abbreviations: IR: incidence rate; ROH: rate of hospitalization; 1H: 1 hundred; 1T: 1 thousand; 10T: 10 thousand; d: delivered before 37 weeks; w: weight less than 5.5lbs; *: Zip codes with the highest rates; e: locations of US Ecology sites; 48211 and 48212: Hamtramck, Michigan; 48213: Detroit, Michigan; 48180: Taylor, Michigan; 48111: Belleville, Michigan; and 48220: Ferndale, Michigan. (created by A. Jordan)

Sources:
https://www.michigan.gov/documents/mdhhs/map_atlas_ADA_x_661747_7.pdf; https://www.michigan.gov/documents/mdhhs/Burden_Report_4.29.19_with_new_author_page_657430_7.pdf; https://vitalstats.michigan.gov/osr/chi/FullTableList.asp?REGIONtype=2&regioncode=09&Submit_LHD=Tables; https://www.michigan.gov/documents/mdch/14_Ch12_Detroit_Epicenter_of_Asthma_276687_7.pdf. https://www.michigan.gov/documents/mdhhs/Detroit-AsthmaBurden_516668_7.pdf; https://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=26&areatype=county&cancer=001&race=00&sex=0&age=001&type=incd#results

Detroit incinerator seeks odor fix as neighbors raise stink

Christine FerrettiNicquel Terry Ellis
The Detroit News
View Comments

Detroit — Amid promises to be a better neighbor, a controversial incinerator just beyond downtown is being accused by the state of having "insufficient" control measures to limit its foul odors.

The state Attorney General's Office submitted a notice this summer to Detroit Renewable Energy on Russell Street informing the plant of a state determination that it needs upgrades before the facility can be released from a 2014 consent judgment.

State environmental officials say their findings are supported by a two-year assessment of odor complaints received by the Department of Environmental Quality "attributed to operation of the incinerator."

But company leaders at the facility, which came under new ownership last year, say they are working to fix the issues at the plant that converts garbage

into energy for city customers, explaining they want to do better for the community.

Chief Operating Officer Michael Marr said Detroit Renewable Energy has "steps in hand" to beef up odor control and plans to invest tens of millions into infrastructure upgrades.

“We want to be a good neighbor, and we recognize that we need to do a little better to be a good neighbor,” Marr told The Detroit News during a recent interview and site tour. “The ownership is willing to make a large investment in this plant to improve its efficiency and to improve its odor control."

Marr said that the plant owners agree with the state's findings and fixes already are in the works. The company, he said, recently undertook a study to identify areas of improvement.

The state's report concluded the plant needed maintenance upgrades to its odor neutralizing system. Some initial changes to that system, Marr said, were made in July.

"We agree that we need to take additional measures and, in fact, we already have some of those measures in hand," he said. "The (AG) letter obviously is not what we want. But by the same token, we recognize we're not doing well. What I want to do is fix the problem and be a good neighbor."

Marr said the odor is caused by decomposing food in the garbage processed at the plant. Decomposing food produces hydrogen sulfide — a gas that smells like rotten eggs.

"It’s a nuisance odor, but it's not harmful," Marr said.

The state’s air quality division considers hydrogen sulfide to be a toxic air contaminant only if it exceeds certain thresholds. The state, however, says it doesn't have adequate equipment or resources to conduct regular ambient air monitoring of hydrogen sulfide or other pollutants it considers toxic.

The stench has long troubled the neighborhood near Interstates 75 and 94, spurred lawsuits and prompted a group this spring to lobby for its closure, saying the site is disrupting their quality of life.

“It’s very offensive,” said Cora Ross, 69, a lifelong Detroiter who lives in a townhome near the plant. “It’s been going on a long time.”

Since the assessment began on June 5, 2016, the DEQ's Air Quality Division logged about 200 odor complaints about the plant from that time through the rest of that year. Of those, about 88 percent were attributed to the plant.

Approximately 200 odor complaints were then filed in 2017. In those instances, about 90 percent were traced to the facility. The DEQ received about 75 complaints as of June 15 this year — 86 percent tied to the plant, the July 31 letter to the company's attorney notes.

Detroit Renewable Energy came under new ownership in December when New York-based Basalt Infrastructure Partners took over as the majority partner and New Jersey-based DCO Energy, a minority partner, took over its operations. The new ownership declined to release the financial terms of the sale.

The plant, originally built and operated by the city of Detroit, is regarded by state officials as the largest municipal solid waste incinerator in Michigan.

This spring, Breathe Free Detroit — a grassroots campaign fighting to get the plant closed — collected 15,000 signatures in a petition calling for Detroit Mayor Mike Duggan to shutter the plant.

The facility receives more than 3,000 tons of garbage every day from Metro Detroit communities and burns it.

In the last year, about 65 percent of the garbage it processed came from the city of Detroit, Marr said. The rest was trucked in from surrounding communities in Wayne and Macomb counties, including the Grosse Pointes, Warren and Livonia.

The company is first trying to change the image of the facility that's long been regarded as a nuisance.

"One of the main things is to try to change the perception that we're an incinerator because we're not," Marr said.

Marr said the plant is a “true renewable energy facility” because it recovers heat from the burning process, uses it in boilers and makes steam to power a turbine that generates enough electricity to power 60,000 homes in the city. The facility has a power purchase agreement with DTE Energy Co.

The balance of the steam from the plant's boilers goes into the city’s steam network, supplying it to about 100 downtown buildings — including the Renaissance Center, Cobo Center and the Gem Theatre — providing them with heat to keep the buildings warm in the winter.

When the plant's new ownership stepped in, it assumed responsibility for all permits as well as outstanding judgments and orders.

Under the 2014 consent judgment, the company must meet multiple milestones and was asked to “re-engineer the facility,” adding a new air duct system to route odors into the incinerator for “destruction.” The consent judgment deals solely with odors.

A separate consent order from last year is related to the plant's emission violations, said Todd Zynda, an inspector for the plant and a senior environmental engineer with the DEQ.

The June 7, 2017, order had the company paying out $149,000 related to multiple emission violations from 2015 and 2016.

The consent order was put in place because the facility exceeded the permitted emission limits for sulfur dioxide, carbon monoxide and particulate matter from one or more of the three boilers operating at the facility, the DEQ has noted.

Under the order, the company has to meet the emission standards outlined in its permits to avoid penalties. It's paid $3,000 in emissions fines since the order went into place, according to DEQ data.

On Friday, the state fined Detroit Renewable Energy another $55,000 for more recent violations.

In the past 14 months, 14 to 15 violation notices have been issued to the plant over concerns involving emissions, reporting or processing.

For each violation, the company is afforded an opportunity to respond. If it can show the violation did not occur, it becomes a non-violation, Marr noted.

The consent judgment resolved 25 violation notices received by the plant over a three-year period.

But in the last 14 months alone, the DEQ has issued about 16 violation notices for odor, said Jeff Korniski, assistant district supervisor of the DEQ's Air Quality Division office in Detroit.

“We’ve uncovered more violations in the last few years than previously,” said Korniski, noting the increase could be tied to population growth and development in the city’s Midtown neighborhood as well as increased awareness of the facility.

Violations in the last year include the plant's failure to complete stack testing within the required time period and several instances of odors that reportedly spread to nearby neighborhoods.

“If we feel that the odors are continuing and the issue is not resolved, we can request additional control measures,” Korniski said in reference to the July 31 letter sent to the plant. “This letter documents that we don’t believe the control measures have been sufficient."

The site's prior ownership paid a $350,000 fine for past odor violations under the judgment and was subject to fines of up to $5,000 per day for future violations of the Michigan Air Pollution Control law.

The company paid $140,000 for odor violations in 2016 and 2017, according to the DEQ.

Earlier this year, Detroit Renewable Energy hired an independent firm, Odor Science & Engineering, to conduct an analysis of the plant's operations and measure air being exhausted from the buildings to identify the sources of the odor.

The plant is also increasing the time it spends surveying neighborhoods for odors from three times a week to daily.

Plant Manager Robert Suida has been with the company since before it changed hands and contends much more is being done today to interact with the public.

"I think there was a closed-minded approach," he said. "We're the new ownership; we want to be transparent and say, 'We know there were some violations. They're not acceptable. We're going to do our best.'"

Organizers from Breathe Free Detroit view the plant's issues as a case of environmental injustice.

Nick Leonard, staff attorney for the Great Lakes Environmental Law Center, said it's unfair that the plant burns trash from other communities yet Detroit residents have to suffer the impact.

A report authored by Breathe Free Detroit estimated that about 21,927 people live near the plant. Of that population, 76 percent are people of color, and 71 percent are low-income.

The report notes that Detroit Renewable Energy has exceeded emissions limits more than 750 times since 2013. Not all of the emissions resulted in violation notices.

Leonard contends state environmental officials have not been aggressive about enforcing state and federal regulations.

"Low-income communities of color are disproportionately subjected to environmental risks," Leonard told The Detroit News. "This is a pattern, and

it’s one that Breathe Free Detroit is trying to reverse with this facility in particular."

Detroit City Council President Pro Tem Mary Sheffield represents the council district where the plant is located and said she's also concerned about its impact on neighbors. Sheffield said "it's good to hear" that the DEQ is seeking additional odor control measures.

"I am concerned about the incinerator and the concerns we consistently hear from the community," she said. "I don't live too far from it. I know there is a problem."

The council, she said, will have the option to renew the city's contract with the facility in the next couple of years and determine whether Detroit still wants to send its trash there. Sheffield said she intends to meet with the new leadership of the plant and her office is working with the DEQ to arrange a public meeting in the fall.

The DEQ's Korniski said the state has been vigilant, and it's striving to bring the facility back into compliance.

“We evaluate the complaints seriously, and we make every effort to conduct our investigations in a prompt, correct manner,” he said.

In regard to the Breathe Free Detroit petition, the DEQ's Detroit office did not receive copies, and it doesn't have jurisdiction over zoning or the authority to shut down a facility apart from “very extreme circumstances,” he said.

The consent judgment over odor concerns will remain in place until all issues are resolved, Korniski added.

Dustin Erlenbeck, 34, moved into a rental home on East Kirby less than a mile west of the plant earlier this summer and already has experienced foul smells and loud noises from the plant.

“I would have liked to have been warned about it," he said. “We’re going to live here for quite a long time."

Despite the concerns, Marr said he believes it's possible for waste plants and residential areas to co-exist in the same part of town.

The plant creates useful energy and is willing to make investments to control the odors. It also employs 130 unionized workers, primarily from Wayne County. More than 50, he said, are Detroit residents.

“We’re an asset to the city," he said. "We’re not a liability."

Detroit Renewable Power waste incinerator pollutes. Is DEQ doing enough?

Keith MathenyKat Stafford

Detroit Free Press

View Comments

Detroit Renewable Power, the large, long-standing solid waste incinerator just off I-94 and I-75, has exceeded pollution emissions standards more than 750 times over the last five years, Michigan Department of Environmental Quality records show.

Most of the incidents were not considered violations by the DEQ, however. They were dismissed because the pollution event was a minimal percentage of the incinerator's overall emissions or occurred during startup or shutdown, when environmental regulations provide more leeway for emitters.

The DEQ, in a negotiation with Detroit Renewable Power and Michigan Attorney General's Office, agreed last June to a consent order citing the company for only eight pollution incidents from 2015 and 2016. The total penalty was $149,000.

"That's really the tool we have to try to bring them into compliance," said Todd Zynda, the DEQ's inspector of the incinerator.

He acknowledged the bureaucratic, regulatory process, at least to-date, isn't reducing Detroit Renewable Power's odor and pollution incidents. "It's not going too well right now," he said.

Kathryn Savoie, Detroit community health director for the nonprofit The Ecology Center in Ann Arbor, concurs with that assessment.

"It's kind of mind-boggling — people are just blown away," she said. "They violate the law; then they get to sit and negotiate how much they should be fined."

Detroit Renewable Power officials did not answer the Free Press' specific questions, instead responding via email with a statement.

"Detroit Renewable Power operates in full compliance with stringent federal, state and local operating and performance permits and regulations," company officials stated. "We regret, however, that since January 1, 2015, the facility has received 18 violation notices for emissions and 22 violation notices for odor. We are working to be better and seeking opportunities to improve our practices to be a good neighbor in our community."

The Free Press, however, in a review of DEQ reports, found almost 200 instances since 2015 where the DEQ found the facility "noncompliant," exceeding pollution limits on a variety of harmful chemicals,

with the regulator issuing notices of violation at least 29 times. Additionally, the records show there were 52 instances since 2015 where DEQ staff investigated area resident complaints of odors, or did their own, independent odor reviews, and found Detroit Renewable Power out of compliance with state standards.

The trash burned at Detroit Renewable Power is used to create electricity — up to 68 megawatts (one megawatt hour can power about 650 homes) — and steam used by numerous buildings downtown, including the Coleman A. Young Municipal Center, multiple Detroit Medical Center hospitals and two towers of the GM Renaissance Center.

Read more:

Audit cites DEQ for failed oversight on asbestos

Dearborn utility seeks OK to up air pollutants

The company, on its website, says it's not an incinerator.

"Modern EFW (energy from waste) facilities such as DRP work very differently from old-fashioned municipal 'incinerators' that were primarily built to reduce waste volume," the company states in a frequently asked questions section on its website.

"Old incinerators burned trash inefficiently, had minimal (if any) air emission control systems, produced smoke, and did not recover any of the energy released during the combustion process. Our EFW facility produces steam and electricity that reduces burdens on landfills, recycles waste metals, doesn't smoke, and cuts greenhouse gas emissions."

The facility operates in an area of Detroit where industrial air pollution abounds from a variety of industrial sources and motor vehicle exhaust, and juvenile asthma rates and hospitalizations far exceed those in other parts of Michigan. The pollutants under scrutiny at the incinerator — carbon monoxide, sulfur dioxide, particulate matter or fine dust pollution, and nitrogen oxides — are considered "criteria pollutants" by the U.S. Environmental Protection Agency — priority pollutants with the potential to harm human health and damage the environment.

The lack of complete enforcement of violations by DEQ raises the ire of Detroit residents who've sought to get the incinerator out of their neighborhood since before the city opened it in 1986.

"It's a classic environmental injustice," said Nicholas Leonard, a staff attorney with the Great Lakes Environmental Law Center who has dug into Detroit Renewable Power's emissions records and DEQ's corresponding enforcement of air quality regulations for Breathe Free Detroit, a nonprofit coalition of environmental and community groups that seeks the shutdown of the incinerator.

"Most of the trash being burned there is not only being brought in from outside the city of Detroit, the City of Detroit is paying more to burn its trash there," he said. "And the residents of the city are being saddled with exceedances of pollutants and odors on summer days — an unfair interference with the use of their property."

Where does it come from?

Leonard said only about 25% of the waste the facility takes in comes from Detroit, and city residents pay more per ton — $25 — to dispose of their waste there than the Grosse Pointes or Warren (about $15 per ton).

"That was obviously something the community cared about and talked about," he said.

Company officials, however, in their statement, disputed those figures, saying "72% of the incoming waste comes from Detroit. In total, 80% of the incoming waste comes from Wayne County."

But public records don't back that up, Leonard said.

"DRP is required to submit annual reports to Wayne County detailing how much waste it receives from each county in Michigan, other states, and Canada," he said. "Those reports had consistently stated that most of the waste burned at the incinerator comes from outside of Wayne County, and specifically Oakland County.

"After we started making an issue of that, DRP retroactively changed their reports going back several years, and have subsequently changed their reporting moving forward to reflect what they've told you."

Leonard provided the Free Press with invoices for trash deliveries to the incinerator that the City of Detroit submitted to the Greater Detroit Resource Recovery Authority, which is responsible for managing Detroit's garbage. Leonard obtained the records through the state's Freedom of Information Act. They show billing for just more than 200,000 tons of waste shipped to the incinerator from the city in 2016.

"What I can tell you with a high level of confidence is that the Great Detroit Resource Recovery Authority, which is the entity responsible for the disposal of municipal solid waste in Detroit, was invoiced for the disposal of 200,125 tons of solid waste in 2016. Additionally, DRP reported that it received 895,680 tons of solid waste in 2016. Therefore, I think we have reliable information that municipal solid waste generated within Detroit accounted for 22% of the solid waste received by the incinerator in 2016."

The higher "tipping fee" for Detroit than other communities accounts for "the priority status the city receives when it comes to receiving waste," Detroit Renewable Power officials said in their statement.

'The smell is horrible'

That priority status was of no consolation to Josh Brooks, 24, who lives less than a half-mile from the incinerator, and grew up and went to school in its shadow near Lafayette Park.

"It's infuriating to know that the majority of the trash that's burned in Detroit — that's going into our air, that I'm breathing, that children are breathing at the school I went to — isn't actually even our trash," he said.

According to a new report from Breathe Free Detroit, which cited EPA statistics, almost 22,000 people live within a 1½-mile radius of the incinerator. Of them, 76% are people of color, and 71% are low-income, the report found. Thirteen schools operate within that radius, with the playground of Golightly Elementary School approximately 1,300 feet from the incinerator.

Odale and Tennille Brown live on Theodore Street, less than a quarter-mile — and downwind — from the incinerator with four children, ages 21 to 12.

"The smell is horrible," said Tennille, 40. "In the summer it gets really bad. Sometimes it will be so thick you can almost taste it."

The couple doesn't move because they own their home, she said.

"That's why we don't have anything over here like family functions," Tennille Brown said. "Who wants to smell that?"

Across the street, Carol Barbee, 55, has lived in the neighborhood since August 1989. She never had lung problems before moving to Theodore Street, but since, she said, she has been diagnosed with sarcoidosis of her lungs and nasal passages, a medical condition in which inflamed cells collect in different parts of the body for reasons that aren't well understood.

Barbee suspects the air quality in the neighborhood has something to do with it.

With regard to Detroit Renewable Power, Barbee said in the summer, "you can smell it without the windows being open.

"A lot of times it smells like fish, feces, urine. You can't even sit outside and enjoy yourself."

Leon Tyler, 55, lives off Chene, and remembers when the area flourished with Polish and African-American families, with department stores just up the street. The stores are long gone, as are most of the Polish immigrant families. Ramshackle vacant houses and empty lots are as common as occupied homes.

"We had pear trees, apple trees, grape vines, but that all went away," Tyler said. "When that incinerator came up, our trees started dying."

Path to incinerator started in the '70s

The city formed a Resource Recovery Task Force in 1975 to begin looking for a waste incinerator site. Concerns about volatility in waste disposal prices, and a perception that landfill space was running out in the state, prompted a push for a publicly owned incinerator.

Economic conditions slowed the project until 1986, when $438 million in construction bonds was approved for the operation at 5700 Russell St.

The facility includes a massive, 4,000 ton tipping floor, or offloading area for garbage trucks, feeding to three processing lines, where the waste is shredded into a form that allows it to be burned. It then moves to a 3,600-ton refuse derived fuel storage area, and from there, it's moved on conveyor belts to one of three large boilers, where it's burned and a layer of water is converted to steam. The steam fuels a turbine generator to create electricity, and is also piped to downtown buildings in a steam loop for heating and cooling.

The facility was initially built to process about 850,000 tons of municipal waste per year, well in excess of the 650,000 tons of waste Detroit was generating at the time.

"The thinking was, if you create this regional hub for incinerating waste, you're creating energy, and potentially, it could be profit-making," said Margaret Weber, a volunteer with Zero Waste Detroit, a coalition of local organizations advocating curbside recycling and opposed to the incinerator in the heart of the city.

Instead, the facility became a financial albatross for city residents. Financing of the incinerator over two decades cost Detroiters $1.2 billion in costs and debt servicing.

When the city sold the incinerator in 1991 to Phillip Morris and GE Capital, the city maintained the debt. What prompted such a raw deal? The need for cash, Weber said.

"The city needed money to balance its budget," she said. "It's like payday lending. Those extremely large percentages come off people's checks. But when you need it, you need it."

The incinerator has since changed hands multiple times and is now privately owned by Detroit Renewable Energy LLC, with the city retaining the land

upon which the facility sits and leasing it to the company through the Resource Recovery Authority.

According to Zero Waste Detroit's report, most of Detroit Renewable Power's revenue comes from steam sales to 85 large customers downtown. Electricity sales are its next-highest revenue source, then waste disposal fees.

Incinerator noise an issue, too

It's not just the smells from Detroit Renewable Power, neighbors said. It's the noise as well.

"From Friday to Sunday, they kick out the steam," Tyler said. "It sounds like a train."

There's a phone number to call to alert DEQ officials about odors emanating from the facility, Brooks said. "But for noise complaints, they tell you, 'We can't handle that; you have to call a city number,' and you call it, and it's some secretary whose voice mail inbox is always full," he said.

"The noise from that is so bad. It sounds like helicopters overhead, or a jet engine. It can last for 30 minutes to an hour."

Why doesn't DEQ do more?

DEQ seeks to address every citizen odor complaint that comes in regarding the incinerator, Zynda said. In 2016, 231 citizen complaints resulted in 17 days of odor violations for the incinerator, he said. Last year, 240 complaints led to 11 days of odor violation notices to the facility, he said.

“A lot of times, they disagree that there is even an odor problem,” he said. “There are other odorous facilities in the area, but this facility really only has one type of odor and it’s sour garbage.”

Detroit Renewable Power agreed in a 2011 consent judgment to take numerous steps to eliminate odors by 2014. Seven years later, odor complaints still come in by the hundreds every year.

In last June's consent judgment, Detroit Renewable Power promised not to exceed pollution limits going forward. By the end of the year, the company had exceeded limits on carbon monoxide, sulfur dioxide and nitrogen oxides at least seven times. The DEQ also found that company officials "failed to report all excess emissions for the Third Quarter 2017 and the Fourth Quarter 2017."

It remains to be seen whether the incinerator will now face more penalties.

The community wants to see more done, Savoie said.

"We would like to see a much stronger and much more urgent action to protect public health," she said.

On Friday, Breathe Free Detroit delivered 15,000 signatures to Mayor Mike Duggan's office, calling for the city to shut down the incinerator.

City officials told the Free Press that Detroit has no authority to shut down the incinerator or power to regulate air pollution control.

"That all falls completely under the MDEQ," the city said in a statement. "So they really should be delivering their petition signatures to Lansing."

The DEQ's $149,000 fine to Detroit Renewable Power last year "is kind of the cost of doing business," to the facility, Savoie said.

"You can see they haven't come into compliance. They just continue to operate in violation of the law."

The incinerator “is absolutely an impediment to becoming a more sustainable city, and to become a cleaner, greener, healthier place to live,” she said.

“An incinerator creates twice as much climate-changing carbon dioxide as a coal plant,” Savoie said. “If we’re burning trash, it’s really hard to get people to recycle.”

Tyler said he remembers the citizen protests as the incinerator was considered and constructed. Their concerns have all come to pass, he said.

“It seems like that place should be in the middle of nowhere,” he said.

“For them to come into this neighborhood and do this type of (stuff)? This neighborhood don’t deserve that.”

Contact Keith Matheny: 313-222-5021 or kmatheny@freepress.com. Follow on Twitter @keithmatheny.

Detroit's incinerator is coming down. Now, neighbors want a say in repairing toxic legacy.

For generations, Angie Kelly and her family have lived within sight of one of the largest solid waste incinerators in the country. Now, Kelly wants to see something that benefits the community's kids in its place. (Photo by Cybelle Codish)

July 18, 2022

Jena Brooker & Brian Allnutt, Planet Detroit

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Detroit's incinerator is coming down. Now, neighbors want a say in repairing toxic legacy.

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Each day, the now shuttered Detroit incinerator on Russell Street burned thousands of pounds of trash and released emissions that made health issues worse for many nearby residents.

For the Kellys, several family members developed severe asthma, causing missed days of work and frequent hospital visits.

"It was horrible. You could see the smoke in the air," said Angie Kelly, 52, a mother, grandmother to 18, and a preschool program teacher at Wayne State University.

A street level view of the former Detroit incinerator on Russell street. The facility, which closed in 2019, burned thousands of pounds of trash each day for decades. (Photo by Cybelle Codish)

As a baby, Kelly's son had severe asthma and was hospitalized for weeks in an intensive care unit. Managing his asthma over his lifetime, she often missed days, even weeks of work. Now, her grandson has asthma too, as do several others in the family.

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Despite strong odors that forced them to stay in their home and caused health issues, the family stayed in the neighborhood because of the schools and affordable housing.

In 2019, the incinerator closed for good, and it will soon be demolished, to the relief of the Kellys and their neighbors. But during the course of its operation, neighborhood childcare and youth centers closed and a new, 2,400-bed jail was built. Some say the incinerator systematically destroyed the neighborhood's fabric over its 33-year presence and residents want to see something of benefit in its place.

While praised by many, the demolition has raised a host of other concerns about what the site's future will hold, what potential revenue received by the city will be used for, and whether dust and other contaminants released from tearing the facility down will further affect neighbors.

The city has sought to reassure Detroiters that they will protect neighborhoods from contamination and include community voices in the next steps. But advocates say there has been a lack of public engagement around the process so far. After suffering for decades, those in the surrounding neighborhood say they want the space turned into something to help make up for the harm caused – a health center, greenspace, or a youth center.

The incinerator should be replaced with "anything having to do with the kids," Kelly said. Within five miles of the former incinerator there are close to 77,000 children, according to Breathe Free Detroit.

"My kids had that type of stuff when they were coming up, they had all these things to go to. All these little centers for the kids – they're gone," added Kelly, pointing to the closure of the Brewster Wheeler Recreation Center, Stone Pool Park and other nearby opportunities for youth. "They need a place to go."

Contamination concerns

Pre-demolition work has begun on the inside of the facility. Tyrone Clifton, director of the Detroit Building Authority, which is overseeing the demolition, said the goal is to have most of it down by the end of the year. Although, he said, demolishing the stack could take until early 2023. The tear down should proceed from west to east, meaning residents in the Poletown East neighborhood will have a bit more distance from the earliest phases of the work.

Clifton referred to the incinerator as a "fairly clean site" despite its reputation for regularly exceeding pollution limits or producing unpleasant odors. Nick Leonard, executive director for the Great Lakes Environmental Law Center, said asbestos and other contaminants in the facility itself could be less of a concern because it was opened in 1986 after some controls for asbestos and other toxic building materials had already been implemented.

But fly ash, which can be windborne, and bottom ash from incinerators can discharge various toxins including heavy metals, dioxins and PCBs and research has found that some of those pollutants can contaminate soil, water and vegetation.

An environmental consultant working with the city's Buildings, Safety Engineering and Environmental Department (BSEED) performed soil testing at the incinerator site and Clifton said remediation won't be needed. But KT Andresky, a Poletown East resident and campaign organizer for Breathe Free Detroit, said her group would like to perform its own soil testing and remains concerned about any contamination from the burning of refuse that may have left residue on the soon-to-be demolished structure.

Activists and residents have requested copies of the soil tests conducted by the city, but have not received them. BridgeDetroit and Planet Detroit also submitted a Freedom of Information Act request to the city for the information.

It's unclear how much of this toxic material might cling to the incinerator or remain in the soil. But, at the very least, the demolition raises concerns about more dust and particulate matter from the tear down impacting a community that, like the rest of Detroit, already suffers from above average rates of asthma.

"Anytime you have sort of a demolition project like this you're concerned about dust from the demolition getting to nearby residents and it being unsafe for any number of reasons," Leonard said. However, he added that this is usually only an issue within a few hundred feet of the demolition and there are no residents living that close.

Clifton said Detroit-based Homrich will be conducting the demolition work and removing asbestos-containing materials prior to razing the structure. The firm will use the "wet method" to reduce dust, spraying down materials consistently to keep particle pollution in place. An environmental consultant, he said, will work with the BSEED to conduct air monitoring during the demolition process.

A 2019 presentation from Breathe Free Detroit pointed to the demolition of the Hanford nuclear incineration facility in central Washington state as a potential road map for Detroit. There, chemical fixatives were used prior to demolition to limit the movement of contaminated dust, but Detroit has no plans to use such fixatives.

Hosam N. Hassanien, an environmental specialist and program manager for BSEED, described fixatives as "potentially harmful chemicals."A water-based rubber adhesive was used in Hanford and although it's unclear exactly which type was applied, some of these fixatives contain volatile organic compounds and other harmful substances.

Andresky said she would like to be notified prior to demolition, the same way neighbors are alerted when a house is being torn down. She said this allows residents to protect themselves and their children from dust and pollutants that may be generated.

“I’ve had to cover my gardens multiple times from demolitions that happened near me. And this facility is just humongous compared to a house,” she said. Andresky also expressed concerns about students at the nearby Golightly Education Center and workers at the city’s Department of Public Works yard.

At a May press conference announcing the incinerator’s demolition, Melia Howard from Detroit’s Department of Neighborhoods volunteered to act as a community liaison and address concerns around the decommissioning of the facility. But Andresky said she hasn’t heard from the department since early June. City officials didn’t respond to requests for information on community engagement efforts.

Clifton said much of the process will look more like a dismantling than a standard demolition. Residential housing, he said, is far enough away from the impact area that door-to-door notifications will not be needed. The “constant water spraying,” he added, will be sufficient to keep dust under control. However, the implosion of the smokestack at the end of the process is likely to create a larger disruption.

“At that point, the closest residential areas will be given information for their awareness,” Clifton said in an email.

‘We need meetings’

Another point of contention between the city and neighborhood advocates is likely to be the $1.3 million Mayor Mike Duggan said would be raised as a result of scrapping materials from the incinerator.

John Roach, a spokesman for the mayor, said that money will go toward operating expenses for the Greater Detroit Resource Recovery Authority (GDRRA), the quasi-public agency that managed the incinerator.

But Detroiters and environmental advocates, like Sandra Turner-Handy, said residents should benefit from those profits and be included in the decision-making.

“Those millions of dollars should be going back into that community because that community has been completely destroyed,” said Turner-Handy, senior policy advisor at the Michigan Environmental Council and a resident of the city’s east side.

“The city should work with residents to decide the best use for the land that the incinerator occupied,” added Turner-Handy, suggesting a health center could be placed there to help redress negative impacts created by the facility.

But the city has signaled it has no plans for such robust community engagement. The city already announced plans for a $5 million animal shelter and an office building for Detroit Animal Care and Control on the site. Clifton said the city also might use some of the land to expand its public works yard.

“In an ideal world, the incinerator would be replaced by a park or something that will try to even slightly undo the damage to the air quality,” said Miles Honey, 24, who grew up near the incinerator. Replacing the incinerator with trees could act as a buffer between the freeway and the neighborhood, while improving air quality, Honey said.

But Honey has little faith in the city to protect residents during the demolition of the facility, given that Detroit let the incinerator operate for decades.

“We need meetings within the community to help guide what happens next on this site,” added Melissa Cooper Sargent, a director for the Ecology Center, an Ann Arbor-based environmental organization instrumental in getting the incinerator shut down.

Having lived within a mile and a half of the incinerator, Sargent said neighbors used air freshener to mask the smells and it kept them from gardening, playing outside, and enjoying the neighborhood.

Melissa Cooper Sargent, a director for the Ecology Center, an Ann Arbor-based environmental organization instrumental in getting the incinerator shut down, said the community should be included in meetings to help guide what comes next. (Photo by Cybelle Codish)

“You would just go back inside,” she said. “You wouldn’t even want to be outside.”

Sargent echoed Turner-Handy, saying she would like to see “a free health clinic for all the people that are still suffering from asthma or heart conditions as a result of all the pollution that was breathed in, that was in our air.”

“It’s a delicate balance between making sure that the people who have lived through the pollution for the past 30, 40 years that the incinerator was burning, are supported and helped so that they can stay,” she said. “We don’t want this community to just all of a sudden be gentrified, because the incinerator is gone. We want it to be a good healthy community for everyone, especially those who have been here.”

After years of watching the neighborhood decline, while prices go up, the Kelly family believes it might be time to move out of the neighborhood. When Angie Kelly first moved into her two-bedroom apartment on Chrysler Drive in 2011 she paid $449. Then the rent went up to $559. Now it's $720, she said.

"Anything they build over there should have something to do with the kids' health, from every age." she said.

The neighborhood's most noticeable feature, the jail, she added, sends the message to neighborhood kids: "'Okay, you don't act right, you're going to be in jail over there,'" she said. "So put a center for them to act right."

BridgeDetroit and Planet Detroit partnered to publish this story.

Does MDEQ put economic growth ahead of people?

Keith Matheny
Detroit Free Press
View Comments

In the public health crisis over the lead contamination of the City of Flint's drinking water, a cascade of culpability has been leveled at federal, state and local officials. But, the Michigan Department of Environmental Quality has borne much of the blame.

In his testimony before a congressional committee on March 17, Gov. Rick Snyder said his administration's investigations into the crisis, "uncovered systemic failures" at the DEQ.

"The fact is, bureaucrats created a culture that valued technical compliance over common sense — and the result was that lead was leaching into residents' water," Snyder said.

But Flint wasn't the first time the DEQ took that approach. And as public anger and outcry over the crisis continues to grow, more scrutiny is being heaped on to the DEQ and its processes and mission, which critics say values business over people.

Records reviewed by the Free Press show that on a number of high-profile environmental matters in recent years — as in Flint — DEQ officials seemingly have downplayed public health concerns in the name of economic development; and how attempts to follow exactly and only what was required under state and federal regulations trumped protective action.

From petroleum coke piles along the Detroit River, to approved hikes in industrial air pollution in Detroit's worst air zones — among the worst in the state and nationally — to a planned tenfold increase in the size of a Detroit hazardous waste processing plant, critics say they see a pattern in how the DEQ operates: rarely saying no to industrial polluters, and with affected neighbors unable to influence environmental outcomes directly impacting the quality of their lives.

As he took office in January 2011, Snyder's first executive order was to return the state departments of Natural Resources and Environmental Quality to two separate agencies, two years after Gov. Jennifer Granholm had merged them. But something else changed with Snyder's re-creation of the DEQ; a difference in tone, philosophy and practice for the state's environmental regulator.

In a rewritten mission statement, under a list of three guiding principles for the DEQ, the second item was: "Be full partners in Michigan's economic development."

When Snyder's now-former DEQ director, Dan Wyant, would use that phrase, "It always made us cringe," said James Clift, policy director for the nonprofit Michigan Environmental Council.

"We want you to focus on protecting natural resources and public health."

Added Guy Williams, president and CEO of the nonprofit Detroiters Working for Environmental Justice: "They've certainly been living it out as written: Minimizing enforcement, maximizing any perceived smooth sailing for business. That is really coming back to haunt us."

Even as the Flint water crisis unfolded, a business-first attitude seemed to pervade: As Wyant resigned over the scandal in late December, Snyder's then chief of staff, Dennis Muchmore — who, at the time, also had announced he was leaving the governor's administration for private business — lamented Wyant's departure in a Dec. 29 e-mail to Snyder's incoming chief of staff, Jarrod Agen.

"I'm not sure why this decision was made, but if it's only optics, keep in mind that finding a replacement who has the trust of the business community will be very difficult," Muchmore said.

His e-mail did not mention the trust of thousands of potentially lead-poisoned Flint residents.

A panel appointed by Snyder Oct. 21 to look into the Flint water crisis issued a scathing report Wednesday, stating: "The Flint water crisis is a story of government failure, intransigence, unpreparedness, delay, inaction and environmental injustice... MDEQ caused this crisis to happen. Moreover, when confronted with evidence of its failures, MDEQ responded publicly through formal communications with a degree of intransigence and belligerence that has no place in government."

Wyant and DEQ public information officer Brad Wurfel both resigned in late December after it was revealed the DEQ had, for more than a year and a half, misinterpreted required federal water treatment standards and failed to require necessary lead control treatments to Flint's water after the city switched from Lake Huron water treated by the Detroit water system to more corrosive Flint River water treated at the Flint water plant. Wurfel, on at least two occasions, publicly attacked the credibility of those raising red flags as water in an increasing number of Flint homes — and children's blood — showed elevated lead levels.

Now, in the wake of Flint, with three out of four Michigan residents surveyed saying Snyder has handled the Flint crisis poorly, a contrite governor — while still defending economic success as one of the DEQ's goals — recognizes something wasn't right.

"Clearly there's a problem with the DEQ that we've tried to reconcile," he told the Free Press on Feb. 22. "We're trying to work through that."

Both DEQ and Flint water officials, Snyder said, displayed "a culture of, 'Here's a regulation; let's just apply the regulation,' rather than saying, 'Let's worry about someone's health.' That's why it's frustrating. It just makes you mad."

Pet coke piles

A public outcry erupted in late winter and early spring of 2013 in southwest Detroit neighborhoods near the Detroit River, after four-story mounds of petroleum coke — a dirty byproduct of tar sands oil refinery used as a fuel commodity — suddenly showed up stored on the river's banks near the Ambassador Bridge.

The DEQ did require some relatively quick action from the company storing the piles, Detroit Bulk Storage. Storm drains near the piles that drained directly into the Detroit River were closed, and a crusting agent was required on the piles to help prevent "fugitive dust" from blowing off them.

It didn't work. Soon, nearby residents were complaining of black soot inside their homes that they suspected was blowing off of the pet coke piles.

The DEQ, however, expressed no great concerns. That March, Andrew Hartz, the DEQ's district coordinator for its southeast Michigan office in Warren, said his agency had not found any discharge or dust problems at the Ambassador Bridge pet coke pile site, or a second pile later removed from the Detroit/Wayne County Port Authority property southwest of the bridge. A DEQ evaluation of the piles had found that they "do not pose a significant public health risk for inhalation exposure."

Jeff Korniski, a senior environmental engineer with the DEQ's Air Quality Division in Detroit, later that spring said, "there have been visual observations of dust leaving the site" of the pet coke piles. Following a complaint from a resident of the Hudson Lofts apartment complex off Fort Street, only about two blocks from the piles, the DEQ took a sample that May that was found to contain the potentially hazardous metal vanadium "consistent with petroleum coke," Korniski said.

For respiratory problems, the “minimum risk level” for vanadium — a daily level of exposure above which a person could expect to experience health impacts — is a scant 0.0008 milligrams of the metal per cubic meter of air, according to the U.S. Environmental Protection Agency. But vanadium levels in air samples near the pet coke piles weren't monitored by the DEQ, only fine particulate levels.

That concerned Jeff Gearhart, research director at the Ann Arbor-based environmental nonprofit Ecology Center. The center performed a laboratory analysis on soot the Free Press obtained from inside the apartment of a resident within one block of the pet coke piles, who wiped it off her counters with a new sponge. The black soot contained the unmistakable fingerprint of pet coke, according to Gearhart's lab analysis.

“The DEQ has unnecessarily claimed that they don’t see any hazards associated with this site, when they simply don’t have the data to support that,” Gearhart said at the time.

Even knowing the dust was blowing off the piles and into nearby residences, Korniski told the Free Press in July 2013 that the DEQ would not necessarily intervene.

“Our regulations do not prohibit all fugitive dust or any fugitive dust from leaving a site,” he said. “It’s a matter of degree.”

The DEQ takes into account the toxicity of the dust, as well as whether fine particles pass certain regulatory average concentration levels over a 24-hour or annual period, Korniski said.

“To my knowledge, we have not found a violation of either standard” with the pet coke piles, he said then.

But because the dust was causing a nuisance to the surrounding community, DEQ officials asked Detroit Bulk Storage, the company housing the pet coke pile, to take additional control measures.

It was a YouTube video only days later, of a swirling black cloud of pet coke dust over the Detroit River, shot from Windsor, that led to further outrage and prompted an order to remove the pet coke piles — by the City of Detroit, not the DEQ.

When a company sought DEQ permission to store pet coke along the river again in 2014, the state agency denied permission.

Steel plant pollution

On three occasions in 2012 and 2013, the DEQ was set to reject the Severstal Dearborn steel plant's request to increase its allowed pollution, citing the steel plant's many ongoing pollution violations, shifting data and the "abhorrent" state of its pollution control equipment.

But each time, intervention by high-level officials at both the DEQ and the Michigan Economic Development Corp. — Snyder's business-promoting agency — helped resurrect the permit process, until its ultimate approval by

the DEQ in May 2014, e-mails obtained through the state Freedom of Information Act showed.

Over a year-and-a-half, through e-mails, meetings and conversations, the DEQ, MEDC and Severstal devised a plan that ultimately led to the steel factory receiving a permit that turned its routine pollution violations into acceptable contaminant levels. It also allowed the plant to operate under 8-year-old rules that wouldn't trigger requirements to install more effective — and expensive — pollution technologies.

The public did not participate in, nor was it informed of, the ongoing process. That is, until February 2013, when the DEQ presented documents related to Severstal's request, announced a hearing and the DEQ's intention of approving the factory's revised pollution permit.

The turnaround in the DEQ's position was significant: In a July 3, 2012, letter from then-DEQ Air Quality Division Chief G. Vinson Hellwig to Severstal Environmental Engineering Manager James Earl, Hellwig pointed to recent

test results showing Severstal's manganese emissions far in excess of its permit.

A study from DEQ's Air Quality Division three months earlier found that elevated manganese levels in the atmosphere "represent a health concern" in southeast Michigan and that "the vast majority" of regional manganese emissions emanate from two local steel plants, Severstal and U.S. Steel.

"As manganese is a pollutant of concern, simply increasing your allowed emission rates is not an acceptable solution of your recent exceedance," Hellwig stated to Earl in his letter that July.

But the permit the DEQ approved in May 2014 allowed a 1,985% increase to Severstal's hourly manganese emissions.

Even with large hikes in Severstal's allowed releases of manganese, lead, carbon monoxide and fine dust, they didn't rise to levels that violated state and federal air regulations, DEQ officials said. That the regulations allowed such increases only points out their inadequacy, a nearby resident said as the permits were approved.

"I have a problem with it," said Latrice Sims, who lived in the Village Park Apartments complex with three children less than a half-mile from the Severstal plant.

"You have to dust your house daily because there is so much dust coming from these factories, especially at night," she said. "Sometimes we find black stuff on our cars; it's terrible. If these particles are on the car, what am I breathing every day?"

Sims said her then-6-year-old son "is in the hospital it seems like every month because his asthma is acting up." She had recently received guardianship of a friend's 7-year-old son. "Now he has a breathing problem living out here," she said.

Wayne County has a juvenile asthma hospitalization rate that is 50% higher than the statewide average, according to state public health statistics.

From July 2010 to May 2012, at one of the times the DEQ was preparing to reject Severstal's permit request to increase its allowed air pollutants, e-mails note there were 117 citizen complaints of air pollution from the Severstal factory; 76 on-site visits from the DEQ in addition to routine surveillance, and more than 20 violation notices sent to the company.

But on Sept. 14, 2012, a meeting of Michigan Economic Development Corp., DEQ and Severstal officials kept the permit alive. Meeting notes taken by MEDC state business ombudsman Amy Banninga, obtained through the Freedom of Information Act, showed attendees included DEQ Deputy Director Jim Sygo, Hellwig and then-assistant Air Quality Division Chief Lynn Fiedler, who now heads that DEQ division.

They discussed a new "tolling agreement" that would set conditions and deadlines for Severstal to correct problems, while allowing it to go past deadlines for action on its permit.

"Tolling — no basis in law — so comment period may be required," Banninga's notes stated.

The notes also showed talk centering on Michigan air pollution Rule 207, which states that the DEQ shall deny a permit application if the department judges the equipment for which the permit is sought won't comply with federal or state air quality rules and laws, including the U.S. Clean Air Act.

"Still risk — legal challenge to going around Rule 207 — fallback will be denial if challenged," Banninga's notes stated.

Sygo, in a July 2014 interview with the Free Press, denied there was specific talk about helping Severstal get around a state air rule.

"I don't think we got around it; our interest was making sure we had an agreement," he said.

The DEQ, with Snyder's economic development team often in the loop, continued to provide concessions to Severstal, even as deadlines were missed and new air violations were discovered.

The area near the Severstal factory is largely comprised of recent Arab immigrants, with many not yet speaking English and not knowing how to have a voice in policy decisions affecting them.

"I'm angry about the situation," said William Ali, a resident of the neighborhood, in 2014.

He then said words that would echo in Flint less than two years later: "There's many people in this community who feel the Michigan Department of Environmental Quality is not doing what's required of them to protect us. Businesses are important, they are a foundation of our nation. But our residents are our bigger foundation. Ensure our kids aren't going to get sicker, and things aren't going to get worse.

"This is a responsibility of the state, the governor, everyone, to protect our interests. As residents, as U.S. citizens, we deserve to live in a clean environment. They are supposed to be protecting us."

The DEQ held a public hearing on the revised Severstal permit at Henry Ford Community College in Dearborn that March. Scores of residents attended, often angry and emotional, discussing the nuisances and health concerns of the air they live in and urging rejection of the permit.

Paul Bruce, a teacher at Salina Intermediate School, a stone's throw away from the Severstal plant, was among the attendees.

"It was terribly evident to us at the time we were at that meeting that this was already a done deal," he said. "We observed how they reacted to the community's comments. It was almost comical."

One DEQ official, Bruce recalled, sat with a legal pad and pen in front of him at the meeting.

"He never once picked up the pen," he said.

The permit was approved less than two months later.

"The regulations allow it"

Two pending high-profile environmental matters highlight that the DEQ following what's allowed in state and federal regulations doesn't always provide adequate protections to impacted residents.

For four decades, residents off Mt. Elliott Street near I-94 in Detroit have lived — somewhat uneasily — next to a hazardous waste processing facility through which tons of the most toxic chemicals from industry are treated and

temporarily stored. But the DEQ's plans last year to approve a permit allowing the US Ecology facility to increase its storage capabilities tenfold drew the ire of many.

"No need to worry — that's what they say. But we don't know that. I'm not in favor of this at all," Beverly Hayes, 48, said last September. Hayes lives half a mile away from US Ecology's Georgia Street facility. She had six children in her home, ages 9 to 15 years.

Hayes' neighbor, Deloris Golston, 70, also opposed the expansion plan.

"If they get bigger, there's a chance that if something were to happen, we'll have more toxic waste we have to deal with," she said.

The DEQ announced its intention to approve a new license for the facility last July that would allow it to increase hazardous waste storage there in tanks and containers from 64,000 gallons to 666,000 gallons. The facility takes in many of the region's most toxic chemicals from industrial processes, as well as very low-level radioactive byproducts primarily from oil and gas hydraulic fracturing, or fracking.

"These are the worst nightmare chemicals of American industry," said Ed McArdle, conservation chair for the nonprofit Sierra Club's Southeast Michigan group last September. "This should be in some isolated place; not in the middle of a city like this."

But Richard Conforti, a DEQ environmental engineer, said the area around the facility is considered industrial.

"They are in substantial compliance and they do things well," he said in September. "If they meet the requirements of federal and state laws and rules, then we would have to grant them the permit."

Protesting residents were granted an extension of the public comment period. Conforti, on March 2, said the agency is preparing responses to "extensive" public comments, and will make a decision on US Ecology's license after that.

Also, the Marathon Detroit refinery is seeking a new air pollution permit from the DEQ that would allow it to increase emissions of at least eight air pollutants at its southwest side facility, including sulfur dioxide, a pollutant for which the U.S. Environmental Protection Agency considers southeastern Wayne County — including the neighborhoods near the refinery — "in non-attainment," or exceeding federal guidelines.

In an area already considered polluted with unacceptable sulfur dioxide levels, some have asked how the DEQ can even contemplate allowing the release of tons more sulfur dioxide pollution into the air each year? The answer: state and federal air regulations allow it.

The emissions would be the result of Marathon's plans to update its liquefied petroleum storage tanks and to install equipment to meet a U.S. Environmental Protection Agency mandate to produce lower-sulfur gasoline beginning in 2017 — Marathon's so-called "Tier 3 project."

Of the 22 tons of additional sulfur dioxide emissions each year mentioned in Marathon's permit documents, only 5.5 tons is related to the refinery's facility upgrades. The other 16.5 tons would come from projected increases in refinery production, according to Andrew Drury, a senior environmental engineer with the DEQ's Air Quality Division.

"If the Tier 3 project does not happen, Marathon is already allowed to emit the roughly 16.5 tons under their existing permits," he said.

"I don't think it's fair," said Sharon Bell, 70, who lives less than a quarter-mile from the refinery, on Edsel Street.

Bell said her 2-year-old great-grandson often comes to visit her, and she worries about what the local air quality means for his health.

"There's a burning smell in the air sometimes, and when they're releasing whatever, there's a fog," she said.

Michael Tate, 55, a lifelong resident of Annabelle Street, just blocks from the Marathon refinery, was incredulous.

"They want to increase the pollutants in air that's already heavily polluted. Wow ... wow," he said.

Drury said that under state and federal regulations, an increase in sulfur dioxide has to be 40 tons per year or more before a "control technology review" is required, in which regulatory agencies review a polluter's methods of limiting air pollution and perhaps require updated technology. Marathon's permits allow it to emit 400 tons of sulfur dioxide per year, and the refinery emitted only 211 tons in 2014, he said.

A decision on Marathon's permit is pending.

"If the regulations say they can do it, they need to change," Bell said.

Tate said: "So the regulations say it's OK to over-pollute an area. The DEQ are spokespeople for the refinery."

The DEQ can't just cite allowable pollutant levels and call it a day, Clift at the Michigan Environmental Council said. State regulations allow the DEQ to act to stop general, nuisance odors. The Michigan Environmental Protection Act states that the DEQ should not authorize any additional pollution "if feasible and prudent alternatives exist," he said.

"There are a couple of different places where the department, if they wanted to do something, they could do something," he said. "In the Marathon refinery area, they should not be approving any increase of emissions."

Air quality regulations also have another flaw, Clift said.

"They look at one facility at a time, one pollutant at a time," he said. "'We've looked at this pollutant, modeled the impact, and it won't expose this home to an unreasonable amount of this pollutant.' What they don't look at is, what is the cumulative impact on that house from the multiple sources?"

Different leadership at DEQ

Snyder's task force, in its final report released Wednesday, called for implementing "a proactive, comprehensive cultural change program within MDEQ ... to refocus the department on its primary mission to protect human health and the environment."

Eleven environmental nonprofits in Michigan sent Snyder a letter Feb. 25, discussing the DEQ's future and outlining qualities they wish to see in the agency's next permanent director.

"Moving forward, you must ensure that environmental protection decisions prioritize human health above all other criteria," the letter states. "This prioritization is critical for the health of Michigan residents, viability of our economy, and your legacy as governor."

The DEQ has lost its way, said Lisa Wozniak, executive director of the nonprofit Michigan League of Conservation Voters and a signatory to the letter.

"Over the course of the last many years, the mission of the DEQ has been obscured — I think it's been more than blurred," she said.

Williams, at Detroiters Working for Environmental Justice, also signed the letter.

"The state has the power to look at a situation and say, 'This is not acceptable for our people, regardless of whether federal law allows it or not,'" he said. "And, so far, we have not had a state government that has the backbone and the courage to stand up for the people who need that support the most."

Contact Keith Matheny: 313-222-5021 or kmatheny@freepress.com. Follow on Twitter @keithmatheny.

Environmental groups reach settlement on Detroit incinerator

BY: KEN COLEMAN **– DECEMBER 17, 2021 2:16 PM**

Detroit Renewable Power facility in Detroit | Ken Coleman photo

Two environmental organizations that had planned to sue Detroit Renewable Power after air emissions violations at a city incinerator said they have reached a $10,000 settlement agreement with Detroit Renewable Power (DRP).

Ecology Center and Environment Michigan informed DRP in January 2019 of their intention to file a suit under the federal Clean Air Act. However, in March of that year, DRP announced the permanent closure of the incinerator.

A call to Detroit Renewable Power was not returned.

“It was important for us to make sure local residents that lived with the odor and air pollution the incinerator generated get some direct remedy,” said Kathryn Savoie, Ecology Center’s Detroit community health director. “We’re hopeful the $10,000 donation to Arboretum Detroit will support the community in healing the environmental harms they have been subjected to.”

Arboretum Detroit is a nonprofit organization that has focused on planting trees in the Poletown neighborhood to the east of the former incinerator site.

“Arboretum Detroit grew out of Poletown residents planting trees as a way to cope with the air pollution coming from the Detroit incinerator,” said Andrew Kemp, Arboretum Detroit president. “This donation will allow us to plant an oxygen park to remind us all that breathing fresh, clean air is a human right and that sometimes we have to fight for it and grow it.”

DRP committed to cease operations and shutter the incinerator in previous settlement agreements with the Michigan Department of Environment, Great Lakes and Energy (EGLE). Those commitments were confirmed in its settlement agreement with the environmental organizations, whose settlement also requires the company to pay the Great Lakes Environmental Law Center, which served as counsel for the environmental groups, $10,000 in attorney fees. The environmental groups were represented by the Great Lakes Environmental Law Center and the National Environmental Law Center. The attorneys and their clients decided to donate the $10,000 in attorney fees to Arboretum Detroit.

“We believed that it was essential for residents to receive something due to the longstanding harm they suffered and to further environmental justice,” said Nick Leonard, Great Lakes Environmental Law Center executive director. “We all agreed that the least we could do was donate the attorney fees we received in connection with this case to Arboretum Detroit.”

The facility located in the central section of Detroit has a long history of emissions violations. A state-imposed fine paid by DRP went to the state general fund, as required by law, and not to the community. The late state Rep. Isaac Robinson, who lived in the area, hailed the 2019 closure.

“This is a victory for families and seniors in District 4 who had to endure dangerous odors for years and shows what a broad coalition of residents can accomplish,” the Detroit Democrat said at the time. “No one should have to live under a cloud of burnt trash. This is an opportunity to focus on job creation and renewable energy without putting our residents’ health at risk. It is important that we work together to assist those working in the plant to find new employment.”

Robinson died of suspected COVID-19 complications in 2020.

KEN COLEMAN

Ken Coleman covers Southeast Michigan, economic justice and civil rights. He is a former Michigan Chronicle senior editor and served as the American Black Journal segment host on Detroit Public Television. He has written and published four books on black life in Detroit, including Soul on Air: Blacks Who Helped to Define Radio in Detroit and Forever Young: A Coleman Reader. His work has been cited by the Detroit News, Detroit Free Press, History Channel and CNN. Additionally, he was an essayist for the award-winning book, Detroit 1967: Origins, Impacts, Legacies. Ken has served as a spokesperson for the Michigan Democratic Party, Detroit Public Schools, U.S. Sen. Gary Peters and U.S. Rep. Brenda Lawrence. Previously to joining the Advance, he worked for the Detroit Federation of Teachers as a communications specialist. He is a Historical Society of Michigan trustee and a Big Brothers Big Sisters of Metropolitan Detroit advisory board member.

MORE FROM AUTHOR

Environmental groups to sue operators of Michigan's largest incinerator over air pollution violations

DETROIT – The citizen-based nonprofit groups Environment Michigan and the Ecology Center announced today that they are taking the required steps to trigger a lawsuit against the operators of the DRP Incinerator, Michigan's largest trash incinerator. The legal action against Detroit Renewable Power LLC and Michigan Waste Energy, Inc. aims to address the incinerator's ongoing breaches of the federal Clean Air Act.

The Clean Air Act's "citizen suit" provision allows private individuals and organizations to sue violators in federal court, but only after first providing 60 days' notice to the violator and government agencies. The 60-day notice letter sent today lists some 600 violations of federal hourly limits on carbon monoxide and nitrogen oxide emissions over the past five years. These acts, which endanger Detroit residents' health, include instances of carbon monoxide levels up to four times higher than the legal limit.

"Past enforcement actions against the DRP incinerator have focused primarily on odors," explained Nathan Murphy, State Director of Environment Michigan. "But this lawsuit will focus on an even more serious problem: the emissions of hazardous air pollutants that affect human health, and chemicals that contribute to ground-level ozone and urban smog."

The suit, which will be filed on behalf of the groups by the non-profit National Environmental Law Center and Great Lakes Environmental Law Center (GLELC), will highlight how high levels of carbon monoxide being produced by the incinerator indicate incomplete combustion of the trash, which leads to numerous health risks.

“When the trash isn’t burned completely, the incinerator emits highly dangerous chemicals such as benzene, toluene, acrolein, and formaldehyde,” said GLELC Executive Director and attorney Nicholas Leonard. “Unless the DRP incinerator strictly complies with its federal limits on carbon monoxide, the danger that these other noxious chemicals spew into local neighborhoods will remain.”

“Living near the incinerator, we hear noises and smell odors all the time,” said Natalee Goto, a resident of Detroit’s Poletown community. “But what I’m really concerned about are the health impacts of the things we can’t see or smell, but are breathing in every day.”

The DRP incinerator burns nearly a million tons a year of solid waste to generate steam (for heating) and electricity. In the process, the incinerator emits air pollutants through a large smokestack. Those pollutants impact those who live and work within two miles of the incinerator, which includes the Midtown and East side neighborhoods, Downtown, Wayne State University, the Detroit Institute of the Arts, and other Detroit cultural institutions.

“We are taking this action to protect the health of Detroit families who suffer from high rates of asthma and other health concerns. When the incinerator repeatedly violates the Clean Air Act, it adds to the health burden of residents who live near the incinerator,” said Kathryn Savoie, Detroit Community Health Director for the Ecology Center. “Our goal is to get the incinerator to operate in compliance with the law.”

The lawsuit will be filed in the U.S. District Court for the Eastern District of Michigan, located in Detroit. The groups will seek both a court order requiring the DRP incinerator to comply with its Clean Air

Act permit and also civil penalties against Detroit Renewable Power and Michigan Waste Energy to punish them for past violations and to deter future violations.

###

Improve Air Quality for Detroit Families: Demand City of Detroit & US Ecology Resolution

City of Detroit,

We need you to create a Host Community Agreement (HCA) between the City of Detroit and U.S. Ecology Detroit South.

Our family has lived downwind from the stench and airborne dust of U.S. Ecology (soon to be Republic Services) Detroit South hazardous waste solidification plant for 15 years. U.S. Ecology Detroit South has consistently been among the worst industrial polluters in Detroit – filling our neighborhood around their Frederick Street facility with odors resembling a mix of rotten fish and strong chemical smells.

Since 2014, the hazardous waste storage and treatment site has received **23 violation notices** from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) due to noxious odor violations.

My family has asthma as a result of years of corporate polluters using Detroit as their dumping grounds. In addition to odors, particulate matter released by U.S. Ecology

causes our asthma to flare. Our neighbors and co-managers of Rising Pheasant Farms, Carolyn Leadley and Jack VanDyke, said at a recent community meeting, “You can see truck tire tracks in the powder coming out of the facility and it affects our breathing when we bike nearby with our children.”

“Our children, like ALL children, deserve and demand fresh air to play, learn and grow in. Noxious smells from the U.S. Ecology Detroit South plant hinder our family’s enjoyment of our neighborhood and our own backyard and pose potential health risks to growing children,” says Carolyn.

We need a host community agreement (HCA) between the City of Detroit and U.S. Ecology Detroit South to help protect residents. An HCA is a legal agreement between the City and a polluting facility that establishes specific community guidelines and regulations that are tailored to the needs of the community. HCAs have been used successfully across the county since the 1990s to lift up the voices of impacted communities.

We are planting a vegetative buffer between us and the hazardous waste facility in an effort to keep our air clean. But, U.S. Ecology should be doing the work to protect the neighborhood from their odors and pollution.

U.S. Ecology Detroit South is in the process of applying for a permit renewal through EGLE to continue operating their facility. Now is the time to pursue additional community protections through an HCA before their permit is renewed! June 2022 is a critical date in the renewal process. We need to make our voices heard now!

Hold community polluters accountable and support the Detroit residents who are fighting for safe and clean air to breathe.

Birch and Kinga Kemp

	Name	City	State	Postal Code	Country	Signed On
1	Melissa Cooper Sargent	Detroit	MI	48211	US	4/7/22
2	Carolyn Leadley	Detroit	MI	48228	US	4/7/22
3	Katherine Andresky	Detroit	MI	48211	US	4/8/22
4	Sharon Buttry	Hamtramck	MI	48212	US	4/9/22
5	Kathryn Savoie	Detroit	MI	48221	US	4/11/22
6	Natalee Goto	Detroit	MI	48201	US	4/12/22
7	Garrett MacLean	Detroit	MI	48219	US	4/12/22
8	Julia Sosin	Hamtramck	MI	48212	US	4/20/22
9	Benjamin Christensen	Hamtramck	MI	48212	US	4/20/22
10	LuAnne Kozma	Charlevoix	MI	49720	US	4/20/22
11	Jamila Martin	Hamtramck	MI	48212	US	4/20/22
12	Joe Ann Williams	Detroit	MI	48213	US	4/21/22
13	Catherine Diggs	Ypsilanti	MI	48198	US	4/21/22
14	Shanna Merola	Detroit	MI	48212	US	4/21/22
15	Lawrence Bolenbaugh	Franklin	MI	48025	US	4/21/22
16	Charles King	Detroit	MI	48228	US	4/21/22
17	Barbara Beesley	Detroit	MI	48212	US	4/21/22
18	Jessica Soulliere	Detroit	MI	48211	US	4/21/22
19	Travis Blake	Detroit	MI	48228	US	4/21/22
20	Sara Weertz	Detroit	MI	48224	US	4/21/22
21	Jason Flack	Detroit	MI	48211	US	4/21/22
22	Valerie Austin	Detroit	MI	48211	US	4/22/22

23	haley c	Macomb	MI	48042	US	4/22/22
24	Zed Trick	Brooklyn	NY		US	4/22/22
25	James-Paul Olechowski	Detroit	MI	48214	US	4/22/22
26	Joanna Hawkins	Woodbridge	VA	22193	US	4/23/22
27	WILLIAM HICKEY	Detroit	MI	48219	US	4/23/22
28	Barbara Matson	Iowa City	IA	52240	US	4/23/22
29	Falcon Knight	Brooklyn	NY	11226	US	4/23/22
30	Vulture Bones	Brooklyn	NY		US	4/23/22
31	Zed Hawk	Brooklyn	NY		US	4/23/22
32	Sarah Pizzimenti	Royal Oak	MI	48073	US	4/24/22
33	Erin Yelda	Detroit	MI	48202	US	4/24/22
34	Daijiro Tsushima	Detroit	MI	48211	US	4/24/22
35	Louella Pizzuti	Detroit	MI	48223	US	4/26/22
36	Riet Schumack	Detroit	MI	48228	US	4/27/22
37	Jennifer Fassbender	Waterford	MI	48328	US	4/28/22
38	jean vortkamp	Detroit	MI	48224	US	4/28/22
39	Verbena Lea	Detroit	MI	48209	US	4/28/22
40	Theresa Landrum	Detroit	MI	48217	US	4/28/22
41	David Sole	Detroit	MI	48224	US	4/28/22
42	Sharon Feldman	Grosse Pointe Park	MI	48230	US	4/28/22
43	Roslyn Walker	Detroit	MI	48224	US	4/28/22
44	Erma Leaphart	Detroit	MI	48228	US	4/28/22

45	Dante King	Detroit	MI	48211	US	5/2/22
46	Marie Walker	Detroit	MI	48211	US	5/2/22
47	Diandra Gourlay	Detroit	MI	48221	US	5/2/22
48	Joseph Cornelia	Detroit	MI	48211	US	5/2/22
49	Gabriela Gibson	Detroit	MI	48208	US	5/2/22
50	Kristin Caffray	Detroit	MI	48206	US	5/2/22
51	monica breen	Detroit	MI	48211	US	5/2/22
52	Spencer Haisha	Detroit	MI	48202	US	5/4/22
53	Timothy Nutt	Detroit	MI	48228	US	5/7/22
54	Abraham Aiyash	Detroit	MI	48212	US	5/8/22
55	Shayne O'Keefe	Detroit	MI	48228	US	5/10/22
56	Jacob Bolton	Detroit	MI	48208	US	5/11/22
57	jamilia mcleod	Detroit	MI	48211	US	5/11/22
58	Rondaeya Redding	Detroit	MI	48207	US	5/11/22
59	Michael Allen	Detroit	MI	48226	US	5/12/22
60	Maggie Sneideman	Detroit	MI	48226	US	5/12/22
61	Kelsey Kerbawy	Detroit	MI	48226	US	5/12/22
62	Kelli Lauria	Canton	MI	48187	US	5/12/22
63	Erin Swinney	Memphis	TN	38133	US	5/12/22
64	Emily Sneideman	Brooklyn	NY	11206	US	5/12/22
65	Robbie Moore	Detroit	MI	48211	US	5/13/22
66	Mikaela Senkus	Detroit	MI	48208	US	5/13/22
67	Megan Sieloff	Hamtramck	MI	48212	US	5/13/22

68	Juliana Witt	Detroit	MI	48235	US	5/13/22
69	Allie Sieracki	Detroit	MI	48211	US	5/13/22
70	Anne Schaut	Munising	MI	49862	US	5/13/22
71	Ken Swetka	St. Clair Shores	MI	48080	US	5/13/22
72	Laila Junco	Detroit	MI	48219	US	5/13/22
73	SUZANNE HUDNUT	Detroit	MI	48238	US	5/13/22
74	James Worden	Detroit	MI	48211	US	5/13/22
75	Matthew Abel	Detroit	MI	48207	US	5/13/22
76	Amanda Blake	Detroit	MI	48211	US	5/13/22
77	Lucienne Soulliere	Sydney		2000	Australia	5/13/22
78	Heidi Heeringa	Ann Arbor	MI	48105	US	5/13/22
79	Christina Ponsaran	Detroit	MI	48211	US	5/14/22
80	Linda Sharpe-Taylor	St Louis	MO	63130	US	5/14/22
81	Pam Pfeiffer	Hamtramck	MI	48021	US	5/14/22
82	Gail Pacurai	Ypsilanti	MI	48198	US	5/14/22
83	PennyJo Kabala	Detroit	MI	48212	US	5/14/22
84	Stephen Somoski	Hamtramck	MI	48212	US	5/14/22
85	Chris Curran	Hamtramck	MI	43613	US	5/15/22
86	Ellen Chamberlain	Farmington Hills	MI	48335	US	5/18/22
87	Angela Lugo-Thomas	Highland Park	MI	48203	US	5/18/22
88	Rich Feldman	Huntington Woods	MI	48070	US	5/18/22
89	Rukiya Colvin	Detroit	MI	48207	US	5/19/22

90	Betsy McCabe	Ann Arbor	MI	48105	US	5/21/22
91	Sudha Myers	Chelsea	MI	48118	US	5/21/22
92	David Lyttle-King	Detroit	MI	48214	US	5/22/22
93	Rachael Zazzara	Montrose	CO	81401	US	5/23/22
94	Andrew Shelley	Hamtramck	MI	48212	US	5/26/22
95	Akram Omasan	Detroit	MI	48212	US	5/27/22
96	Erica Foondle	Wyoming	MI	49509	US	5/27/22
97	Barbara Checket-Hanks	Detroit	MI	48234	US	5/29/22
98	Habib Alhadai	Detroit	MI	48211	US	5/30/22
99	Bashir Nusair	Hamtramck	MI	48044	US	5/30/22
100	Joni Sobczak	Hamtramck	MI	48212	US	5/31/22
101	Megan Hardy	Detroit	MI	48210	US	5/31/22
102	Julie Wild	Livonia	MI	48154	US	5/31/22
103	Charlene Barczak	Romeo	MI	48065	US	6/1/22
104	Justine Lauer	Detroit	MI	48211	US	6/1/22
105	Sharonie Williams	Detroit	MI	48211	US	6/4/22
106	Mansour Alshahri	Detroit	MI	48234	US	6/5/22
107	David Lanciuault	Waterford	MI	48327	US	6/7/22
108	Austin Ward	Corvallis	OR	97330	US	6/7/22
109	Im Not letting you see my name	West Chester	OH	45069	US	6/7/22
110	Bella Hall	Athens	AL	35611	US	6/8/22
111	Jennifer Schlicht	Ann Arbor	MI	48103	US	6/8/22

112	Lydia Virzi	Pontiac	MI	48342	US	6/8/22
113	Nadia Miah	Sterling Heights	MI	48310	US	6/8/22
114	Val S	Chicago	IL	06065	US	6/8/22
115	Mari Rymar	Dearborn Hts.	MI	48127	US	6/8/22
116	Jody Wright	Flushing	MI	48433	US	6/8/22
117	Robert Hove	Lansing	MI	48917	US	6/8/22
118	Eliot Carter	Southfield	MI	48075	US	6/8/22
119	Kay Cumbow	Brown City	MI	48416	US	6/8/22
120	Phoebe Allen	Hebron	CT	06248	US	6/8/22
121	Steve Wildern	Detroit	MI	48227	US	6/8/22
122	Misty Hughes	El Paso	TX	79904	US	6/8/22
123	Gavin Huang	Davis	CA	95616	US	6/8/22
124	Ian Dickson				US	6/8/22
125	Jesse Hall	Louisville	KT	40245	US	6/8/22
126	Joe Ann Cooper	Detroit	MI	48211	US	6/8/22
127	Carol Barbee	Detroit	MI	48211	US	6/8/22
128	Kashira Dowridge	Detroit	MI	48207	US	6/8/22
129	Ricardo Moses	Detroit	MI	48211	US	6/8/22
130	Alicia Hamilton	Detroit	MI	48203	US	6/8/22
131	Rondaeya Redding	Detroit	MI	48207	US	6/8/22
132	Sam Scardfield	Detroit	MI	48207	US	6/8/22
133	Dante King	Detroit	MI	48211	US	6/8/22
134	Princess Dennis	Detroit	MI	48211	US	6/8/22

135	Tracy Randle	Detroit	MI	48203	US	6/8/22
136	Pamela McGhee	Detroit	MI	48207	US	6/8/22
137	Shance Dennis	Detroit	MI	48211	US	6/8/22
138	Linda Jones	Detroit	MI	48211	US	6/8/22
139	Jason Jordan	Detroit	MI	48211	US	6/8/22
140	Ellen Allen	Detroit	MI	48211	US	6/8/22
141	Stephen Allen	Detroit	MI	48211	US	6/8/22
142	Martha Wraugh	Detroit	MI	48211	US	6/8/22
143	Juan Carlo	Detroit	MI	48211	US	6/8/22
144	Vernesha Singleton	Detroit	MI	48211	US	6/8/22
145	Sharonie Williams	Detroit	MI	48211	US	6/8/22
146	Aaron Bulley	Detroit	MI	48211	US	6/8/22
147	Jerome Purry	Detroit	MI	48211	US	6/8/22
148	Moe Holeluke	Detroit	MI	48211	US	6/8/22
149	Tim Sargent	Detroit	MI	48211	US	6/8/22
150	Garrett MacLean	Detroit	MI	48211	US	6/8/22
151	Lori Cataldo	Detroit	MI	48211	US	6/8/22
152	Chris Price	Detroit	MI	48211	US	6/8/22
153	Antrey Lona	Detroit	MI	48211	US	6/8/22
154	Minnie Alexander	Detroit	MI	48211	US	6/8/22
155	Lamont Conley	Hamtramck	MI	48212	US	6/8/22
156	Kenneth James	Hamtramck	MI	48212	US	6/8/22
157	Jadwiga Kishiboulere	Hamtramck	MI	48212	US	6/8/22

158	Schnel Robinson	Detroit	MI	48211	US	6/8/22
159	Dominik Johnson	Detroit	MI	48211	US	6/8/22
160	Shay Pringle	Hamtramck	MI	48211	US	6/8/22
161	Jamal Massat	Hamtramck	MI	48211	US	6/8/22
162	Gwendolyn Wright	Detroit	MI	48211	US	6/8/22
163	Askia Wright	Detroit	MI	48211	US	6/8/22
164	Michael Duncan	Detroit	MI	48211	US	6/8/22
165	Kristen Ternes	Detroit	MI	48211	US	6/8/22
166	Charles Hamm	Detroit	MI	48211	US	6/8/22
167	Tory Stallworth	Detroit	MI	48211	US	6/8/22
168	Marcus Lewis	Detroit	MI	48211	US	6/8/22
169	Robert Sestok	Detroit	MI	48211	US	6/8/22
170	Quinn Emery	Detroit	MI	48211	US	6/8/22
171	Mike Jone	Detroit	MI	48211	US	6/8/22
172	Dee Brown	Detroit	MI	48211	US	6/8/22
173	Eric Alexander	Detroit	MI	48211	US	6/8/22
174	Rick Smit	Detroit	MI	48211	US	6/8/22
175	Angela Goins	Harrison	TN	37341	US	6/9/22
176	Dane Kelly	Des Plaines	IL	60016	US	6/9/22
177	Shiloh Robinson	Matthews	NC	28104	US	6/9/22
178	Kendrick Henry	New Ulm	MN	56073	US	6/9/22
179	Madi Hartel	Centreville	VA	20120	US	6/9/22
180	katie barkley	Escanaba	MI	49829	US	6/9/22

181	Jordan Crain	Starkville	MS	39759	US	6/9/22
182	Walid Saleh	Detroit	MI	48228	US	6/10/22
183	Celimar Torres	Orlando	FL	24208	US	6/10/22
184	Brenda Choi	Las Vegas	NV	89121	US	6/10/22
185	Sophia Grisham	Dallas	TX	75071	US	6/10/22
186	Dave Duffield	Walled Lake	MI	48390	US	6/10/22
187	George Duffield	Grosse Pointe	MI	48236	US	6/10/22
188	James Mulcahy	Plymouth	MI	48170	US	6/10/22
189	Joshua Brady	Paulina	LA	70763	US	6/10/22
190	Robin Culler	Lawrenceville	GA	30044	US	6/10/22
191	Brenda Choi	Las Vegas	NV	89121	US	6/11/22
192	Meagan Mathews	Oklahoma City	OK	73159	US	6/11/22
193	Will Rauschert	Chicago	IL	60647	US	6/11/22
194	Walter Schultz	Galesburg	IL	61401	US	6/11/22
195	Heidi Goodrich	Lenox	IA	50851	US	6/11/22
196	Linden Rosati	Leesburg	VA	20176	US	6/11/22
197	Tiara Rocquemore	Henderson	KY	42420	US	6/11/22
198	Shayna Young	Lumberton	NJ	08048	US	6/11/22
199	Shawn Ash	Westminster	MD	21157	US	6/11/22
200	Lance Brown	Mexico			US	6/11/22
201	Lamyiah Parker	Greenville	NC	27858	US	6/11/22
202	John Dunn	Morristown	NJ	07960	US	6/11/22
203	Jason Carbajal	Baldwin	NY	11510	US	6/12/22

204	Barleen Kaur	Mount Holly	NJ	08060	US	6/12/22
205	Philip Satterlee	Edmond	OK	73012	US	6/12/22
206	Carol Gilchrist	Walled Lake	MI	48390	US	6/12/22
207	Ava Banks	Lehigh Acres	FL	33971	US	6/12/22
208	Jhu Cut	Atlanta	GA	30307	US	6/12/22
209	Riley Grace	Girard	PA	16417	US	6/12/22
210	Samira Kethu	Plano	TX	75093	US	6/12/22
211	ptv Solos	San Benito	TX	78586	US	6/12/22
212	Rebecca Andrade	East Stroudsburg	PA	18302	US	6/12/22
213	Sean Lucas	Perry	OK	73077	US	6/12/22
214	Mikaela James	San Pablo	CA	94805	US	6/12/22
215	Fire Scythe	Los Angeles	CA		US	6/13/22
216	Jada Puchi	Connellsville	PA	15425	US	6/13/22
217	Kim Hunter	Detroit	MI	48216	US	6/15/22
218	Michel Sohel	Detroit	MI	48221	US	6/15/22
219	Erin Stanley	Detroit	MI	48215	US	6/15/22
220	Yvonne McCullough	Greenville	SC	29615	US	6/16/22
221	David Grygo	Langhorne	PA	19047	US	6/16/22
222	Cassidy Harris	Pennsylvania	PA	10019	US	6/16/22
223	Eden Williams	Pensacola	FL	32526	US	6/16/22
224	Andres Torres	College Station	TX	77840	US	6/16/22
225	Gabe Sch				US	6/16/22
226	Edna Miklosek	Toledo	OH	43613	US	6/17/22

227	Rachael Buckay	Detroit	MI	48211	US	6/28/22
228	Janelle Love	Detroit	MI	48213	US	6/28/22
229	Lyndsey Braman	Detroit	MI	48202	US	6/29/22
230	Mel Herrera	Detroit	MI	48214	US	7/3/22
231	Marian Steggerda	Detroit	MI	48219	US	7/3/22
232	Kristen Ternes	Dearborn	MI	48211	US	7/3/22
233	Detroit People’s Platform	Detroit	MI	48202	US	7/3/22
234	Erica Bloom	Ann Arbor	MI	48104	US	7/5/22
235	Kaci Messeder	Saline	MI	48176	US	7/5/22
236	Katrina Hamann	Ann Arbor	MI	48108	US	7/5/22
237	Robert Shobe	Detroit	MI	48214	US	7/5/22
238	Emily Jones	Alanson	MI	49706	US	7/5/22
239	Jacob Sirhan	Royal Oak	MI	48073	US	7/5/22
240	Nayyirah Shariff	Flint	MI	48503	US	7/5/22
241	David Clover	Detroit	MI	48211	US	7/5/22
242	Monica Booker	Rochester Hills	MI	48307	US	7/5/22
243	Linda Campbell	Detroit	MI	48202	US	7/5/22
244	Gabby Gonzales	Ludington	MI	49431	US	7/5/22
245	Valerie Jean	Detroit	MI	48202	US	7/5/22
246	Angela Coe	Detroit	MI	48208	US	7/6/22
247	David Miechiels	Detroit	MI	48207	US	7/6/22
248	Benjamin Christensen	Hamtramck	MI	48212	US	7/6/22
249	Madelyn Tucker	Southfield	MI	48033	US	7/6/22

250	Jessica Berger	Ann Arbor	MI	48108	US	7/6/22
251	Klair Urbin	Detroit	MI	48211	US	7/6/22
252	Emily Haase	Van Nuys	CA	91405	US	7/6/22
253	Miles Honey	Detroit	MI	48211	US	7/6/22
254	Marie Gallagher	Commerce	MI	48382	US	7/7/22
255	Karalyn Grimes	Lansing	MI	48910	US	7/7/22
256	Sam Shafer	Troy	MI	48083	US	7/7/22
257	Amanda Nguyen	Ann Arbor	MI	48103	US	7/7/22
258	Aaron Stark	Ann Arbor	MI	48105	US	7/7/22
259	Drew Kennerly	Roseville	MI	48066	US	7/7/22
260	Jacob Kelly	Romulus	MI	48174	US	7/7/22
261	Sarah Peterson	Detroit	MI	48207	US	7/8/22
262	Jennifer Russell	Detroit	MI	48219	US	7/9/22
263	Erik Mccleary	Ann Arbor	MI	48105	US	7/11/22
264	Terese Warn	Detroit	MI	48219	US	7/18/22
265	Joe Garofalo	Hazel Park	MI	48030	US	8/4/22
266	Andrew Bertapelle	Lansing	MI	48915	US	8/17/22
267	Carl Goines	Detroit	MI	48211	US	8/30/22
268	Raphaël PONCE	TOULOUSE		31140	France	9/7/22
269	Anne Montarou	Ahrensburg		22926	Germany	9/7/22
270	Mike Andrews	Hamilton		L8N1M2	Canada	9/7/22
271	Chris Hart	Morristown	IN	46161	US	9/8/22
272	Genesis Valdez	Houston	TX	77038	US	9/8/22

273	Adam Kaluba	Burleson	TX	76028	US	9/8/22
274	Keanna Hubner	Sioux Falls	SD	57106	US	9/8/22
275	Dajiah Conda	Chicago	IL	60644	US	9/8/22
276	Mo Woute	Stevens Point	WI	54481	US	9/8/22
277	Nina Verplaetse				US	9/8/22
278	Gabrielle Wares	Garland	TX	75043	US	9/8/22
279	Max Gordon	Brooklyn	NY	11216	US	9/8/22
280	Allyson Spiering	Lincoln	NE	68506	US	9/8/22
281	Corey McFarlane		MD		US	9/8/22
282	Johna Alan	Houston	TX	77084	US	9/8/22
283	Sherry Aldridge	Raleigh	NC	27610	US	9/8/22
284	Leilani Millsaps		OH	44134	US	9/8/22
285	Engin Dertli		VA	20152	US	9/8/22
286	Semaj Thomas	Lawrenceville	TX	30046	US	9/8/22
287	Rachel Gann	Sevierville			US	9/8/22
288	Joshua Curphey	Peterborough		PE7	US	9/8/22
289	Nadine Miller	Detroit	MI	48223	US	9/10/22
290	Melody Cooper	Detroit	MI	48211	US	9/12/22
291	Linda Cooper	Novi	MI	48377	US	9/12/22
292	Kenneth Smith	Detroit	MI	48211	US	9/12/22

How Detroiters Finally Won the 30 Year Fight to Shut Down Enormous Trash Incinerator

by Elizabeth Harlow

Ash and Cash

When the Detroit trash incinerator went online in 1989, it was the largest trash-to-energy incinerator in the world. At a cost of $438 million, it was the most expensive single project the City of Detroit had ever undertaken. Its operation turned out to be a costly disaster for Detroiters until 2019: the neighboring community suffered from high levels of asthma-inducing air pollution and endured a stench that made backyards unusable, while taxpayers lost millions.

Residents fought to keep the plant from opening, and then to shut it down, for thirty years.

As a health hazard and noxious neighbor, the incinerator drew protest from citizens, environmental coalitions, and Canadian leaders across the river since planning began in the mid 1970s. Mayor Coleman Young and City officials nevertheless forged ahead to build it, betting that the costly incinerator would ultimately save the city money with a long term waste management plan and state-of-the-art technology.

The gamble failed spectacularly. In debt and losing roughly $2M each year on the facility, the City opted to sell the incinerator in 1991 to reduce a budget deficit, just two years after the plant opened. They didn't sell the construction bonds, however, and Detroit citizens ultimately paid $1.2 billion in incinerator debt, which dogged Detroit into bankruptcy in 2013.

A Noxious Neighbor

The incinerator failed to meet emission standards even when it was brand new. A Detroit Free Press commentator noted in 1989 that "[e]ven the EPA has admitted that it botched things by originally granting approval" in 1984. The plant experienced its first

shutdown over violations in 1990, just a week after the city's first permanent recycling center opened. Several hundred protestors celebrated and staged a mock funeral with cardboard coffins outside the facility.

Incinerator builder off the hook?

Incinerator foes cheer its closing

Company claims contract excludes mercury liability

The Detroit News
Sunday, April 22, 1990

The incinerator made some mandated upgrades to come into legal compliance and then reopened. The battle went on like this for decades. But the incinerator also started accepting trash from all over the region, most notably from the wealthier surrounding suburbs. The Ecology Center worked on and off with community groups throughout these years to challenge the incinerator.

In the mid-2000s, the Ecology Center joined with environmental justice organizations and community groups to renew the fight against the Detroit incinerator, and to promote zero waste in Detroit. The Zero Waste Detroit (ZWD) coalition promoted a positive vision of a zero waste future and fiercely organized to close the facility, securing temporary closures of the incinerator as it continued to violate clean air laws while burning over 850,000 tons of trash each year, mostly from more affluent communities outside of Detroit.

The incinerator spewed gases like sulfur dioxide and carbon monoxide, and heavy metals such as lead, mercury, and cadmium. It spewed them into residential neighborhoods,

including 13 schools and 22,000 people living within a 1.5 mile radius of the smokestack in 2018. People living in the vicinity of the incinerator faced a higher rate of asthma than anywhere else in the state. In a textbook case of environmental racism in America's largest majority minority city, the closest neighborhoods were and are mostly black and brown and poor, comprised by 76 percent people of color and 71 percent low income families in 2018.

Breathe Free Detroit

In 2015, two of Zero Waste Detroit's member organizations--the Ecology Center and East Michigan Environmental Action Council (EMEAC)--again reinvigorated efforts to shut down the incinerator. These efforts coalesced formally into the Breathe Free Detroit campaign in 2017 when community members leading the efforts, including Ecology Center's Kathryn Savoie and Melissa Cooper Sargent, saw an opportunity: the state had announced a public hearing in response to residents' many odor complaints and other documented violations.

As its first official event, Breathe Free Detroit hosted a community forum to educate community members on how to give effective testimony at a public hearing, resulting in a powerful showing at the hearing. An estimated 150 people attended with about 50 providing influential personal testimony.

For the next two years, the Breathe Free Detroit campaign continued to organize residents in the surrounding neighborhoods to call for the facility's closure, amplifying the volume of complaints and concerns that had been voiced and dismissed for so long.

Residents filed odor complaints with the Michigan Department of Environmental Quality, attended further public hearings, and staged demonstrations to demand

relief. In 2018, the campaign published a comprehensive analysis of the incinerator's operation conducted by the Great Lakes Environmental Law Center, including documentation of over 750 air permit violations in the span of just three years.

Campaign participants rallied for a press release to deliver the report personally to Mayor Mike Duggan's office, alongside a petition signed by almost 15,000 people. The action generated increased incinerator coverage in the Detroit Free Press, Detroit News, and other local media, breaking into national news as well.

The Ecology Center and Environment Michigan dealt the final blow to the beleaguered incinerator in February 2019 by filing a notice of intent to sue Detroit Renewable Power (DRP), the owner of the incinerator, for its hundreds of air permit violations. Anticipating a negative judgment that would force major capital upgrades to the facility, DRP closed the incinerator a week before the lawsuit would have been filed, with acknowledgment that they couldn't be a "good neighbor" and a profitable business entity at the same time.

Detroit After Incineration

Ecology Center and Environment Michigan still have a citizen suit pending against DRP and hope a negotiated settlement may bring some restitution to residents forced to endure the incinerator's egregious and illegal pollution. While legal negotiations continue, the Breathe Free Detroit campaign continues fighting for the neighborhoods around the incinerator, tackling gentrification and other issues.

With Detroit's longtime worst polluter finally gone, the Ecology Center's focus has turned to making Detroit a zero waste mecca, while also tackling other air quality threats in the city. Recently, we've deployed air monitors to give residents real-time information on air problems.

Created in partnership with the Environmental Justice HistoryLab at the University of Michigan. More Information.

MASSIVE QUANTITIES OF PFAS WASTE GO UNREPORTED TO EPA

US Ecology failed to report more than 11 million pounds of PFAS-contaminated waste at its facility in Beatty, Nevada.

Sharon Lerner

August 5 2022, 7:00 a.m.

A WASTE MANAGEMENT company received millions of pounds of waste containing toxic firefighting foam and other materials contaminated with the industrial chemicals known as PFAS in 2020 yet did not report it to the Environmental Protection Agency, according to public records.

US Ecology, a hazardous waste company with dozens of sites around the U.S., received 11,638,732 pounds of waste containing the firefighting foam known as aqueous film-forming foam, or AFFF, at its facility in Beatty, Nevada, in 2020, according to public reports filed under the Resource Conservation and Recovery Act. The company has also received, and did not report, waste containing AFFF at its facilities in Robstown, Texas, and Grand View, Idaho. It is unclear whether the company's failure to disclose the waste violated the law or whether it was legal under a loophole in the reporting requirement.

US Ecology referred questions for this story to Republic Services, a waste management company that acquired US Ecology in May. Republic Services did not respond to multiple requests for comment.

AFFF — which has been used for decades by firefighters in the military, airports, and other settings to put out jet fuel fires — contains PFAS chemicals that have been detected in drinking water across the country, as The Intercept was the first to report in 2015. (At the time, PFAS chemicals were known as "PFCs.") PFAS have also been used to make Teflon and hundreds of other products, and some of the compounds have been shown to cause health problems, including immune deficiency, cancer, liver damage, thyroid disease, decreased fertility, obesity, hormonal irregularities, and high cholesterol.

In 2019, as the public became increasingly aware of the health risks from widespread water and soil contamination from PFAS, Congress passed the National Defense Authorization Act, which required the EPA to add certain PFAS compounds to the Toxics Release Inventory, or TRI, a public EPA database to which companies must legally report if they have "manufactured, processed, or otherwise used" certain chemicals. There are now 180 PFAS compounds on the list.

The Environmental Protection Agency (EPA) building in Washington, D.C., U.S., April 27, 2021.

Photo: Stefani Reynolds/Bloomberg via Getty Images

EPA Loopholes Violate Law

But there are critical gaps in the requirements for reporting PFAS-containing waste, as the massive amount of unreported waste at the Nevada facility suggests. There is a 100-pound reporting threshold for PFAS chemicals — a huge amount considering that even extremely low levels can cause health problems. The agency recently acknowledged the threat when it set dramatically lower safety thresholds for levels of PFOA, PFOS, and two other PFAS compounds in drinking water in June.

The EPA allows companies to avoid reporting PFAS to the TRI, through a loophole known as the "de minimis exemption," if the individual PFAS compound makes up less than 1 percent of the total volume of the waste — or .1 percent, in the case of PFOA. But AFFF often contains multiple PFAS chemicals, and even low concentrations of a single compound can add up to extremely dangerous amounts — especially when large quantities are involved, as is the case with the 11 million pounds of AFFF-related waste at the US Ecology facility in Beatty, a small town northwest of Las Vegas.

The loopholes undermine the intent of the Emergency Planning and Community Right-to-Know Act, according to advocates. The law, which was passed after a leak of poisonous gas killed thousands in Bhopal, India, enabled community members and environmental agencies to learn about chemical releases and pollution control measures reported by local companies. "Without it, it's impossible for regulators to have any idea where they might have hot spots of pollution, where they might have industries where they should be looking into wastewater permitting, where these chemicals are being burned, where you might need to put a fish advisory in place," said Sonya Lunder, the senior toxics policy adviser at the Sierra Club.

According to Eve Gartner, the managing attorney for the Toxic Exposure and Health Program at Earthjustice, the exemptions violate the letter and spirit of the 1986 law. "The fact that EPA made PFAS subject to these exemptions was an illegal move that was first adopted during the Trump administration and has now unfortunately been replicated two times in the Biden administration," said Gartner, who sued the EPA in January on behalf of the Sierra Club, the Union of Concerned Scientists, and the National PFAS Contamination Coalition over the issue. "This is not at all what Congress intended."

In an emailed response to questions from The Intercept, EPA spokesperson Timothy Carroll wrote that the agency plans to address the problem soon. "This fall EPA plans to propose a rulemaking that would classify certain PFAS as 'chemicals of special concern,'" Carroll wrote. "Such a rule, if finalized, would increase PFAS reporting under TRI by, among other changes, removing the eligibility of the de minimis exemption for PFAS for reporting and supplier notification purposes — reversing the approach set forth by the previous Administration. Until such a rule is finalized, EPA must continue to allow the de minimis exemption."

Over the past year, Gartner and her staff have compared filings under the Resource Conservation and Recovery Act, which requires reporting of hazardous waste, with records from the TRI. The results showed that several companies that reported receiving hazardous PFAS waste under the law did not report the waste to the TRI. US Ecology had the largest amount of unreported material, according to Earthjustice research, but other companies also reported significant amounts of the compounds under the RCRA and failed to disclose them to the TRI, which requires more detailed and in-depth information.

On August 3, the Sierra Club sent a letter to Republic Services inquiring about the unreported waste and providing records that it says suggest the company violated the TRI's reporting requirements.

Advocates fear that many other companies may be failing to report PFAS to the TRI. "These chemicals are circulating in products and in ways throughout the United States with almost no tracking and

ability to know where they're going and where their final destination might be," said Lunder.

Gentle Reminder

The EPA also may have noticed the discrepancy between the RCRA and TRI records, according to emails obtained through a public records request. In one sent to US Ecology in July 2021, a senior chemical engineer at the EPA named Velu Senthil wrote, "Your facility has not submitted any report for Hexafluoropropylene oxide dimer acid to TRI for reporting year 2020, but might have received Hexafluoropropylene oxide dimer acid in excess of processing / otherwise use reporting threshold amounts from one or more TRI facilities for waste management activities such as disposal and/or treatment. Please review and submit new report for Hexafluoropropylene oxide dimer acid for reporting year 2020, if required."

The email referred to a PFAS compound that was added to the TRI's list of reportable chemicals in 2020. According to the law, companies may be fined up to $25,000 for each day they are in violation of the Emergency Planning and Community Right-to-Know Act. But Senthil was clear that he didn't intend to punish them.

"This inquiry does not assume that there is a reporting error," he wrote in the email. "Rather, EPA would like to provide you an opportunity to review and validate your submission(s) regarding the below observation(s) and make correction(s), if necessary."

The EPA has given companies the opportunity to review and change their TRI reporting before. As The Intercept previously reported, under President Donald Trump the agency encouraged some facilities that emit ethylene oxide to lower the amounts of releases of the carcinogenic gas that were recorded in the TRI.

But according to Earthjustice's Gartner, the most alarming aspect of the EPA's communication with US Ecology about its TRI reporting

isn't the gentle tone or omission of any possible penalties but its failure to mention that the company had also apparently received and failed to report more than 11 million pounds of AFFF-containing waste in addition to the hexafluoropropylene oxide dimer acid.

"When you compare our letter to US Ecology with EPA's letter to US Ecology, they're night and day," said Gartner. "I'm glad they asked about that chemical if they thought maybe there was noncompliance for that chemical. But if EPA was looking at the same RCRA manifests that we were, why didn't they say anything to US Ecology about receiving 11.6 million pounds of PFAS-contaminated AFFF?"

Enforcement is key to making the TRI meaningful, according to Gartner. "Because if this law is just an empty promise to communities, it's really not going to do anything. The facilities have to know that if they don't comply, there will be enforcement," she said. "So they have to be honest about the level of PFAS they're manufacturing using and releasing."

The EPA's Carroll said the agency is doing all it can to address the PFAS problem."EPA is leveraging the full range of statutory authorities to confront the human health and ecological risks of PFAS," Carroll wrote. "These actions include a regulatory process to remove exemptions and exclusions that limit the quality of TRI data, expanded unregulated contaminant monitoring of 29 PFAS in more drinking water systems and at lower levels than ever before, and a commitment to use enforcement tools to better identify and address PFAS releases at facilities."

A sign warns visitors of the White Pine Trail of PFAS contamination in the Rogue River in Rockford, Michigan, U.S., Oct. 17, 2021.

Photo: Matthew Hatcher/Bloomberg via Getty Images

Everyone Is Exposed

The discovery that huge amounts of PFAS-contaminated waste are escaping the EPA's chemical tracking system comes just as the agency has begun to acknowledge the extreme toxicity of these industrial chemicals. The drinking water advisories the agency set in June are just .004 parts per trillion for PFOA and .02 parts per trillion for PFOS — which are roughly 1,000 times lower than the previous standard and below the current limits of detection.

The updated advisories are likely to mean that everyone encounters chemicals at levels above what the EPA has deemed safe. "My guess is that there are no people on the planet who have that kind of low exposure," said physician and environmental health researcher Philippe Grandjean.

Grandjean, who studies the immune effects of PFAS, has known for years that extremely low levels of the chemicals can be dangerous. In 2008, he noticed a study that showed that mice exposed to the chemicals had decreased immune function. And in 2012, he documented the same phenomenon in children living in the Faroe Islands.

By analyzing the blood of children before and after they were vaccinated for tetanus and diphtheria, he found that those with lower levels of PFAS had stronger responses to vaccinations. His findings, which were published in the peer-reviewed Journal of the American Medical Association in 2012, were striking: Among 7-year-olds who had been vaccinated against diphtheria, higher levels of PFAS were associated with lower levels of antibodies to those diseases. For each doubling of exposure to the chemicals, the risk that the vaccine didn't take increased two- to four-fold.

The following year, Grandjean calculated that the safety levels for both PFOS and PFOA should be less than 1 part per trillion. Yet until June — more than a decade after Grandjean's results were first published — the EPA's official safety threshold sat at 70 parts per trillion.

Deadly Delay

A similar lag has plagued the EPA's handling of PFAS waste reporting, according to environmental advocates. The agency has taken more than a decade to begin tracking the chemicals around the country, even though it was clear as far back as 1999 that some members of the class were toxic. By 2006, the EPA had helped craft a voluntary agreement with eight companies to phase out the use and production of PFOS and PFOA, two of the best-known PFAS compounds. At the time, the agency issued a press release stating that it was "initiating efforts to add PFOA and related chemicals to the Toxics Release Inventory." But PFOA and PFOS were first added to the list of reportable chemicals in 2020, more than a decade after the EPA said it had begun the process.

“The failure to list PFAS on the TRI as soon as EPA knew how toxic and persistent they were was a major failure that led to the loss of lives,” said Gartner, who pointed to the EPA’s 2006 announcement that it had begun the process of adding two PFAS compounds to the inventory. “That didn’t actually happen until 2020 — so 14 years of delay in giving communities information about releases of PFOA and PFOS into their drinking water. And that’s unacceptable.”

Opinion: In a Michigan City, Environmental Justice Gets a Critical Test

undark.org/2022/03/10/in-a-michigan-city-environmental-justice-gets-a-critical-test

By Farah Kader 03.10.2022 March 10, 2022

Drive 10 to 15 minutes north from downtown Detroit and you may pass through Hamtramck, Michigan, a city of just about 2 square miles that's home to many communities of color, including Yemeni and Bangladeshi immigrants and African Americans. Here, in an area where nearly 70 percent of households speak a language other than English, a case of environmental injustice is unfolding — one that is a microcosm of nationwide efforts to advance health equity for generations to come.

More than 2,000 of Hamtramck's roughly 22,000 residents live within a half-mile radius of the U.S. Ecology Detroit North waste management facility, which processes and stores toxic heavy metals and other toxic waste produced by commercial entities and governments. Over the years, the facility has amassed a spotty track record on environmental safety compliance. In 2016, the Detroit Free Press obtained records showing the company had accrued 150 wastewater violations since 2010, for infractions that included discharging water with excessive levels of toxic mercury and arsenic into the city sewer system. In 2017, independent tests of public lands surrounding the facility found soil samples containing arsenic, a known carcinogen, at levels almost 20 times the EPA safety limit. (The facility has longstanding waivers that exempt it from groundwater and soil monitoring.)

Related

Opinion: The Long Shadow of Lead Contamination

Several years ago, as residents began to catch wind of a proposed expansion that would increase the site's chemical waste storage capacity ninefold and permit it to process 30 new categories of hazardous waste, including cancer-causing aflatoxins, local activists cried foul. They filed petitions and staged protests, to little avail. In 2020, after delaying its final decision and extending the public commenting period, the Department of Environment, Great Lakes, and Energy, the state agency that oversees hazardous waste management, approved the facility's expansion.

A battle to protect residents of Hamtramck is now being waged by the Great Lakes Environmental Law Center, which has filed a formal grievance with the EGLE's Nondiscrimination Compliance Coordinator. The coordinator reviews Title VI complaints in accordance with Environmental Protection Agency regulation. In addition to violating that regulation, the law center alleges that the decision to issue the expanded license to the U.S. Ecology facility also constitutes discrimination under Title VI of the Civil Rights Act. The grievance notes that 80 percent of the residents within a 3-mile radius of the site are people of color.

The lawyers contend that, although the EGLE provided public notice of the proposed expansion, the agency failed to make those notices available in languages appropriate for the many Arabic and Bengali-speaking immigrants who live near the facility. Further, the complaint states, public hearings that were promised to be language-accessible, at the behest of residents and grassroots organizations, ultimately were not. EGLE has since released a Limited English Proficiency Plan that outlines steps the agency will take to comply with federal civil rights law and public notice requirements in the future.

Meaningful language access to legally mandated environmental information disclosures is a key component of many regulations and EPA discrimination-related complaints. But another, perhaps more far-reaching criticism leveled in the Hamtramck grievance centers on a concept that has become a perennial point of contention in environmental regulation: an idea known as cumulative risk.

A large body of research in disciplines such as toxicology and social epidemiology has demonstrated that environmental pollutants can act in conjunction with one another, and that a person's health can be negatively impacted by the accumulation of health risks over his or her lifetime. The nature of these risks extends beyond toxic chemical and biological exposures; stress-inducing socioeconomic conditions, often prevalent among people of color, pose risks to human health as well. These factors may act cumulatively or even synergistically with environmental toxicants to exacerbate the risk of adverse health outcomes.

There's reason to believe that such cumulative risks could be inordinate in communities in and around Hamtramck. The city is marked by high population density and poverty rates, two factors that are associated with high incidence of chronic disease. Predominantly Black areas of metropolitan Detroit already face high volumes of industrial pollution and have some of the highest asthma rates in the country. In Hamtramck, many Bangladeshi and Yemeni immigrants have had to endure both chemical exposure and social toxicity. In addition to ongoing xenophobic and Islamophobic discrimination, some Yemeni immigrants still suffer psychological and biological effects of forced displacement from their home country, a war-torn nation where violence, famine, and disease are commonplace. These comorbidities and social stressors would likely be amplified by further exposure to environmental pollution.

Moreover, Bangladeshi immigrants to the U.S. come from a country that has among the highest level of groundwater arsenic contamination in the world, and many have brought their agricultural traditions to Detroit, where they rely on urban farming. They may be fearful of the cumulative toll that continued exposure to arsenic in groundwater and soil could take on their health.

Predominantly Black areas of metropolitan Detroit already face high volumes of industrial pollution and have some of the highest asthma rates in the country.

In its grievance against EGLE, the Great Lakes Environmental Law Center argues that the agency should have assessed these cumulative risks before approving the expansion of the U.S. Ecology Detroit North site. The complainants maintain that Michigan's continual permitting of polluters that contribute to Hamtramck's disproportionate burden of health-related risks is, in itself, discriminatory.

However, there exist few federal mechanisms for compelling state and local agencies to consider cumulative risk when reviewing permit applications. The EPA has spent this past year developing long-awaited updates to its framework for planning and implementing cumulative risk assessments, with the aim of encouraging more health-focused state permitting decisions, but the guidance is not legally binding. The National Environmental Policy Act requires cumulative risk assessments only for facilities that receive federal funding, a category that excludes facilities such as U.S. Ecology's Detroit-North site. (Even for those facilities that are subject to the policy act, the law does not actually require that states base their decisions off the results of the cumulative risk assessments.)

In the absence of a federal mandate, cumulative risk assessments are not standard in most states' environmental regulations. In part, this may be because implementing and enforcing state-level cumulative risk assessments require significant investments of time and resources: Stakeholders must come to terms on every aspect of these complex analyses, from the types of stressors that a risk assessment must consider to the methodology for estimating how a new activity might elevate population-level risks.

Still, those hurdles have not stopped some states from formally incorporating cumulative risk assessment into their environmental protection laws. Some states limit these laws to certain types of emissions; New York for instance, enforces cumulative risk assessments for air pollution. But other states, such as Massachusetts and Minnesota, have adopted wider-reaching cumulative risk measures and include mechanisms for community participation. The Hamtramck case illustrates why it's so important for more states to follow their lead.

The outcome of the grievance filed on behalf of Hamtramck's residents is still pending. But this much seems clear: Decades of science have shown that the health risks of environmental pollution, particularly in marginalized communities, cannot be measured in toxicity levels alone. Until lawmakers formally codify this principle into law, environmental justice will continue to prove elusive for marginalized communities like those in Hamtramck.

Farah Kader is a New York-based research analyst. She holds a B.A. in public health from the University of California-Berkeley and an MPH in environmental health sciences from the University of Michigan.

Pangea Environmental, LLC
Mike Wilczynski
Certified Professional Geologist
Pangea52@yahoo.com
248.318.4732

September 11, 2022

RE: Odor and Contaminant Migration in Sewers Near US Ecology-South

Pangea Environmental, LLC has started to conduct a study into the source and composition of the odors emanating from the combined sewers around US Ecology-South. Combined sewers contain and transport not only stormwater but also sanitary wastes from homes and businesses. Under an Industrial Pretreatment Permit (IPP) industry can also discharge industrial waste into the combined sewer system that exists throughout Detroit. The area around US Ecology-South is a good candidate for a study of the relationship between shallow groundwater and the state of the sewers in the City.

Recently, Pangea Environmental, LLC was an expert witness for the plaintiffs in a class action lawsuit against the City regarding the stormwater disposal fee. Our sworn testimony mentioned the leaky sewers and the interactions with stormwater and groundwater. In the US Geological Survey (USGS) and USEPA study for Recovery Park, a location 0.2 miles away from US Ecology South, it is documented that the sewer system is old and in poor repair. The study determined that 40% of the dry weather inflow into the Detroit sewers at this location was groundwater. That is a lot of leaks. If groundwater can flow into the leaking sewers; odors, vapors, and contaminants discharged to the sewers can migrate out of these sewers and into soil and groundwater surrounding the pipes.

Odors in the residential area surrounding US Ecology have been reported to be worse after rain events. This is the result of incoming stormwater pushing the odors and any airborne contaminants out of the sewer system and into the ambient air. It is also possible for the odors and contaminants that cause them to be pushed into homes through the permeable backfill around the sewers. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) includes soil vapor migration as a

Pangea Environmental, LLC
Mike Wilczynski
Certified Professional Geologist
Pangea52@yahoo.com
248.318.4732

pathway in its analysis of sites of contamination and has established criteria for the protection of human health.

In general, sewers allow for the rapid migration of contaminants over large distances compared to contaminants moving in the groundwater. Leaking sewers allow for the release of contaminants into the groundwater and for the contaminants in the groundwater to enter the sewers and be transported to other areas of the City. To protect human health and the environment from further harm, these issues emphasize the importance for policymakers to prioritize infrastructure repair in communities overburdened by pollution from nearby industry.

We can be contacted for further information and to answer questions. Thank You.

Pangea Environmental, LLC
Mike Wilczynski
Certified Professional Geologist-Emeritus
Hydrogeology and Environmental Geology

The blackest city in the US is facing an environmental justice nightmare

Environmental injustice in Detroit. Photograph: Nick Hagen/The Washington Post/Design by OneZero

Detroit's most vulnerable residents face inequalities like toxic air, lead poisoning, and water shutoffs. Now they're fighting back

Drew Costley

Thu 9 Jan 2020 05.00 EST

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Growing up in south-west Detroit, Vince Martin thought it was normal for the sky to be orange.

When he was three years old, his family moved from Cuba to one of the black areas of town. At the time, discriminatory housing practices segregated the city. His Afro-Cuban family settled in the 48217 district, now Michigan's most polluted zip code, where 71% of the population is black and air pollution makes the sky look like it's on fire.

Specifically, the Martins moved to Boynton, a working-class neighborhood. The town sits next door to a Marathon oil refinery and its sprawling industrial campus.

Martin, now an environmental activist in Detroit, remembers the refinery being made up of "one or two tankers" when his family settled there in the 1960s. Now, Marathon is a 250-acre tank farm that emits so much air pollution it's received 15 violation notices from the Michigan Department of Environment, Great Lakes and Energy since 2013 for surpassing state and federal regulations emission limits. (Marathon denies any wrongdoing, claiming it has reduced emissions by 75% over the last 20 years and only contributes to 3% of emissions in the area.)

But Martin saw air quality worsen as the refinery grew over the decades. He believes he escaped the worst of it in his youth because he traveled so often for sports, but others "weren't so fortunate".

At his 30-year high school reunion, it seemed to Martin that more people in his class were dead than living. He knew many had died from cancer. As a child, Martin's younger brother David developed asthma and juvenile diabetes, both of which have been linked with air pollution. Every few days, Martin remembers, David was rushed to the hospital with respiratory issues. "These episodes kept happening every time he'd try to go outside and enjoy his environment," says Martin. After a life of health complications, David died at age 45 from what Martin calls "toxic poisoning".

"Seeing someone with such joy in life, seeing it stripped away little by little, it's a terrible thing," Martin says. "To be in a community like that and be exposed to those kinds of pollutants. It's a sad story."

These stories are common in the 48217. Four of the state's top emitters of particulate matter sulfur dioxide and nitrous oxides, which can, respectively, cause respiratory issues, and create acid rain are located within a five-mile radius of Boynton.

The situation in the 48217 is by far the worst out of all the areas in Detroit, but environmental problems pervade the entire city. And in Detroit, the blackest major city in the United States, those problems fall disproportionately on poor communities and communities of color. De-population, white flight and the implosion of the city's manufacturing industry have left behind vulnerable communities. These communities are now struggling, and fighting to survive.

We're actually Dr Frankenstein's laboratory in Michigan. How you just going to sit here using these people as guinea pigs?
Vince Martin

Like Houston, Texas, and Richmond, California, Detroit is a stark example of what happens when poor people of color live alongside environmental destruction. "Detroit is a microcosm of the national and global crisis on climate change," says Michelle Martinez, coordinator of the Michigan Environmental Justice Coalition, which lobbies for a safer environment for the state's most vulnerable groups.

Often, these communities are portrayed as hapless, or helpless. But OneZero spoke with four environmental justice activists in Detroit who have taken their own futures – and the future of their communities – into their own hands.

"Eventually a lightbulb goes off and you see that your community is a sacrifice," says Martin. "We're actually Dr Frankenstein's laboratory in Michigan. How you just going to sit here using these people as guinea pigs?"

Environmental justice activists have been fighting for a healthier Motor City for nearly 40 years.

Donele Wilkins, a pioneer in the environmental justice movement in Detroit, is one of them. In the 1980s, Wilkins was an occupational safety worker who became part of a conversation to erect a new solid waste incinerator in the middle of the city. The people involved in building the incinerator, mostly white men, saw it as an opportunity for a new construction job, she says. Government officials and many citizens were excited about it as well: an incinerator, then thought of as a safe, cost-effective waste disposal method, could attract new industries. But the city workers who would eventually have to work in the incinerator facility, many of whom were black, opposed its construction. Wilkins was there to lobby for them.

"They had some idea that it would not be a healthy workplace," she says.

One of the things that motivates me is my determination to make sure not another child dies because they can't breathe
Donele Wilkins

Wilkins, driven by the knowledge "that it was my people who live in the shadows of factories and are impacted by all of these environmental injustices", lobbied to shut down the incinerator for decades. The incinerator was burning trash from Detroit, but also from suburban, majority-white neighborhoods like nearby Westland. Wilkins argued that known pollutants produced by the incinerator were linked to higher rates of cancer and respiratory issues, birth defects, and endocrine diseases. In 2018, a lifelong Detroiter named Kim Hunter, representing a group called Breathe Free Detroit, collected over 15,000 signatures on a petition to the Mayor to close the facility.

Finally, in March 2019, the incinerator closed for good – a significant win for Detroit's advocates.

In 2017, a report from the NAACP showed that in Detroit, 2,402 black children have asthma attacks due to natural gas pollution per year and miss 1,751 days of school as a result. Across Michigan, the report showed, 40% of the population in counties that have a refinery are black.

"One of the things that motivates me," Wilkins says, "is my determination to make sure not another child dies because they can't breathe".

Access to clean water, like clean air, is not a given in Detroit. For residents, the cost of water has nearly doubled since 2007. In 2014, the city began shutting off water to residents whose bills were more than 60 days overdue. By October 2018, more than 112,000 homes had lost access to water, and an additional 11,000 homes lost water for a week or more this year. "We're talking about people bathing babies in bottled water," said Gunn-Wright, the Green New Deal co-author, at an HBCU Climate Change conference in New Orleans this November. "People collecting rainwater to drink and to feed their children, to cook their meals."

In 2014, software developer Tiffani Ashley Bell tweeted her disgust after hearing about the water shutoffs. A Twitter user responded, offering to pay a Detroiter's water bill if she could pay it directly to the water utility. A lightbulb went off for Bell: that night, she built a website that connected Detroit residents who needed help paying their water bills with donors who were willing to help. That effort evolved into The Human Utility, a nonprofit that raises funds to pay the water bills of residents of Detroit and other cities whose service has been shut off. Since 2014, The Human Utility, which received startup funds from Y Combinator's nonprofit program, has paid the

water bills of over 1,100 families, mostly in Detroit with the help of over 4,500 individual donors.

“I thought it was a problem that we shouldn’t be having,” says Bell, who is now also a columnist at the Medium publication Marker. In 2020, The Human Utility plans to use crowdsourced funds to pilot a water subsidy program that will lower the water rates of 100 Detroit families. Bell hopes it will show the city that residents will pay their water bills, if the rates are reasonable.

There is no guarantee, however, that the supplied water will be safe to drink. This year, Wilkins was approached by a man who said he had been sleeping in his car with his daughter after she experienced lead poisoning from the water in their home. They were not from Flint but from Detroit itself, where lead poisoning has driven others from their home as well.

People don’t realize that the average life expectancy of someone living in Detroit and someone living in the suburbs is a difference of 10 or 15 years.
Michelle Martinez

Lead-emitting facilities in Detroit are disproportionately located or moving to black neighborhoods, according to a 2017 study. Even after these facilities close, lead left behind in the soil remains dangerous. It’s especially harmful for children, who can experience behavior and learning problems, lower IQ, hyperactivity and slowed growth if they carry even low levels of lead in their blood.

Traces of lead contamination in young Detroit children rose by 28% in 2016 over the year prior, and not just because of increased testing, said Lyke Thompson, director of the Center for Urban Studies at Wayne State University. Experts point to lead in dust, paint, and soil as understudied culprits. In 2019, 500 “hydration stations” had to be installed in Detroit’s public schools so students could access water free of lead, copper and other contaminants.

“The fact is that we live in the shadows of countless brownfield sites and lead smelters ... that used to crush and incinerate batteries from the auto industry that contain lead,” says Wilkins.

In 2019, Martinez and the MEJC partnered with the University of Michigan’s School of Environment and Sustainability to create a map of the most and

least environmentally just places in the state. The map aggregates public data of pollutants and contaminants, health outcomes and demographics in a census tract or zip code and assigns an environmental justice score to the area. It made plain with data what many already knew anecdotally: Michigan zip codes with higher concentrations of people of color and poverty levels, lower educational attainment, and other indicators of social disadvantage bore the greatest pollution-related burdens in the state.

It also makes the divisions in Detroit's segregated geography, created by redlining and white flight, starkly plain. The environmental justice score for Boynton, where Martin grew up, is 78; in Oakwood Heights, where Marathon's oil refinery is, the score is 80. Less than half an hour away in Grosse Pointe Shores, the richest neighborhood in Michigan, the score is 14.

"People don't realize that the average life expectancy of someone living in Detroit and someone living in the suburbs is a difference of 10 or 15 years," Martinez says. The creators of the map hope it will be adopted by state officials to monitor and act upon environmental justice in the state.

Detroit's citizens are being choked to death by air pollution. The city's water crisis is on the level of some developing nations

While the national discourse focuses on reducing greenhouse gas emissions and shifting to clean energy sources, Detroit must focus on immediate needs. Its citizens are being choked to death by air pollution. The city's water crisis is on the level of some developing nations. Vacant factories have left behind toxic stains that will persist long after the refineries and factories have shut down. Detroit's population has dwindled from 945,741 at the start of the millennium to 673,104 in 2017, and the city's lack of preparedness for climate change suggests it will continue to crumble in the years to come.

And yet, Detroit's activists are optimistic. To Martinez, the environmental situation in Detroit represents "an enormous opportunity to reclaim the labor movement, the principles of the civil rights movement, and to reclaim the modes of production".

She points to the approximately 1,600 community gardens in Detroit, which have sprouted up in lots abandoned by people who fled the city after 2008. "That's a local, organic, closed-loop economy that is working to feed our elders organic, affordable food every season," she says.

As the city's infrastructure disintegrates, its activists are dismantling Detroit's history of environmental injustice and preparing for climate change by bringing green jobs to the city.

Though the fight has been arduous, Wilkins says that the incremental wins, like shutting down the city's incinerator, fill her with the hope she needs to continue pushing for environmental justice for the people in her hometown.

"I understand the resilience of my people," she says. "See, we survived the middle passage. We survived the worst case of human treatment anyone in this world can experience. We survived Jim Crow. We survived all the ugliness. We're still here. And while I'm here in this moment, my job is to advance whatever needs to be advanced so that my people can be better off.

"I fight for the strength of the greater good," says Martin. "I speak for the little kids growing up who don't know that they're going to have to deal with these issues in the future."

The Detroit incinerator has been awful for 30 years. Why is it closing now?

Nancy Kaffer
Detroit Free Press

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What changed?

It's not Detroiters, who have objected to the trash incinerator's presence in our community since before it opened in 1989.

And it's not the incinerator, which has been flouting state and federal environmental regulations for nearly that long.

But with little notice — even to the 150 workers who staff the place — Detroit Renewable Energy abruptly announced Wednesday that it was shutting the incinerator down.

CEO Todd Grzech all but admitted that the facility, nestled in the crook of I-94 and I-75, can't turn a profit if it doesn't break the law. I mean, what's *your* read of Grzech's insistence that there's not enough money to "be a good neighbor" and also "go forward as a business entity"?

But breaking the law hasn't really been a problem for the incinerator's operators over the last 30 years. There's been little political will or practical ability to hold the incinerator accountable for violating air quality standards.

The Michigan Department of Environmental Quality cited Detroit Renewable Energy 750 times between 2013 and 2018, a Free Press investigation found. That's once every 2.4 days. But the MDEQ was willing to negotiate with the incinerator operator, fining it just $149,000 for eight of those offenses.

And that's more or less par for the incinerator course.

More: Detroit Renewable Power waste incinerator pollutes. Is DEQ doing enough?**More:**Controversial Detroit incinerator shut down after years

If you're like me, you expected this situation to limp along forever: Detroiters increasingly frustrated with the smokestacks belching noxious odors and dangerous pollutants over our neighborhoods (Full disclosure: I live within smelling distance of the incinerator); the incinerator's operator

unwilling to fix the facility's flaws, the Michigan Department of Environmental Quality willing to negotiate away the incinerator's most expensive violations; and the City of Detroit continuing to insist that its hands were tied.

Something, it seems, has changed.

Obviously, it's money

I couldn't ask Detroit Renewable Energy *why now*, because Grzech didn't call me back.

The answer Grzech gave reporters earlier this week is money. It's always money. But the *why* behind the money? I think it's people.

Detroiters changed the political math

Detroit Mayor Mike Duggan's office said Wednesday that the city has been pushing Detroit Renewable Energy to address problems at the site for a year, and that the mayor intends the site to never again be used for incineration.

It's a strong statement, says Margaret Weber, convener of Zero Waste Detroit, a community group that opposes the incinerator and advocates for more environmentally responsible waste solutions.

And it's in sharp contrast to generations of Detroit politicians, who have always accepted the incinerator as a problem we just had to live with.

Weber says Detroiters who live near the incinerator have continued to organize, most recently via consistent and ongoing reporting of odors and air quality problems to MDEQ. Grassroots groups delivered petitions to city hall, and widely circulated information about childhood asthma rates for kids who live by the incinerator.

It sounds lame to say they raised awareness, except that's what happened. Detroit city officials seem to have grown more receptive to residents' complaints, and more leery of the incinerator as a long-term solution to Detroit's trash needs.

The actual math also changed

The brainchild of late Detroit Mayor Coleman Young, the incinerator was always controversial. Detroit environmentalists and the Province of Ontario sued to stop it before it was built. Young saw the incinerator as not just a solution to Detroit's trash problems, but as a moneymaker for the cash-strapped city.

The incinerator opened in 1989, and for the next 30 years was never not a problem.

Nor was it the moneymaker Young envisioned. The city sold the incinerator to the first of a series of private operators in 1991, but kept the $1.2 billion in debt it had issued to build the thing, because the last few decades of Detroit's history have not been characterized by good deal-making.

By 2018, a Great Lakes Environmental Law Center investigation in conjunction with Breathe Free Detroit found, Detroit was producing 22 percent of the waste burned at the incinerator, but paying about $25 per ton, about 67 percent more than other communities sending trash to Detroit, like Warren or the Grosse Pointes — those cities pay $15 per ton.

That's not a good deal, and it's a classic case of environmental injustice, says Nick Schroeck, a University of Detroit Mercy professor who served as executive director for the Great Lakes Environmental Law Center: It's a waste disposal method that puts an unfair financial and environmental burden on a majority-minority community.

City hall insiders say there was a real chance Detroit was prepared to abandon the incinerator when its current contract expired in 2021, all of which must have made the prospect of significant investment in the incinerator, without a long-term commitment from its largest customer, even less attractive to Detroit Renewable Energy.

And some stuff in Lansing changed

The new Democratic elected officials in Lansing deserve a nod, Schroeck adds.

Former Gov. Rick Snyder saw the MDEQ as an economic development agency, per a mission statement penned on his watch. Environmentalists said Snyder's MDEQ focused on meeting business' needs, not prioritizing residents' health. Snyder also OK'd the creation of so-called "polluter panels" composed of industrial professionals that could override MDEQ permitting decisions.

An early executive order issued by Gov. Gretchen Whitmer would have abolished those panels, and reformed MDEQ as the Department of Environment, Great Lakes, and Energy. (The GOP-led state Legislature forced Whitmer to leave the polluter panels intact.) Newly elected Attorney General Dana Nessel made it clear during last year's campaign that she prioritizes enforcing environmental regulations.

Nancy Kaffer is a Detroit Free Press columnist. Contact: nkaffer@freepress.com.

THE DETROIT INCINERATOR PRIMER:

Construction, Design, and Operation

Nicholas Leonard
Staff Attorney, Great Lakes Environmental Law Center

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BREATHE FREE DETROIT

Breathe Free Detroit is a campaign started by the East Michigan Environmental Action Council, the Ecology Center, the Great Lakes Environmental Law Center, and numerous concerned community members, with the goal to shut down the Detroit incinerator. We work to engage the community, research the financial ties and public health effects of the incinerator, and encourage decision-makers to stop the pollution of Detroit's air.

This report was prepared by the Breathe Free Detroit campaign to serve as a resource for individuals, organizations, and government representatives that are interested in the history and current operations of the Detroit Renewable Power incinerator.

www.ecocenter.org/breathe-free-detroit

Find this document on-line at:
[insert web address]

THE DETROIT INCINERATOR PRIMER

Construction, Design, and Operation

Nicholas Leonard
Staff Attorney,
Great Lakes Environmental Law Center

GREAT LAKES ENVIRONMENTAL LAW CENTER

ECOLOGYCENTER
Healthy People, Healthy Planet

EAST MICHIGAN ENVIRONMENTAL ACTION COUNCIL

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BREATHE FREE DETROIT IS A CAMPAIGN THAT WAS STARTED BY THE EAST Michigan Environmental Action Council, the Ecology Center, the Great Lakes Environmental Law Center, and numerous concerned community members. This report has been prepared by the Breathe Free Detroit Research Committee to serve as a resource for individuals, organizations, and government representatives that are interested in the history and current operations of the Detroit Renewable Power incinerator.

Services Provided by the Incinerator

Since 1986, the incinerator has operated at the intersection of I-94 and I-75 at 5700 Russell Street in Detroit. While initially constructed and owned by the city of Detroit, the facility has been privately owned and operated since 1991. The facility currently provides three primary services: solid waste disposal, electricity, and steam.

Solid Waste Disposal: The incinerator is permitted to process over 1 million tons of solid waste per year. According to a national directory of incinerators prepared by the Energy Recovery Council, the Detroit incinerator is the largest facility of its kind in the country. It is also the fifth largest solid waste disposal facility in the state of Michigan. The majority of solid waste burned at the incinerator comes from outside of the city of Detroit. According to invoices supplied by the Greater Detroit Resource Recovery Authority, the city of Detroit sent 217,052 tons of solid waste to the incinerator in 2016, which was approximately 25% of the total amount received. Additionally, Detroit, by contract pays $25 per ton to dispose of solid waste collected within the city at the incinerator. Other communities, such as Warren and the Grosse Pointes, pay approximately $15 per ton. According to a Detroit Renewable Power report, fees associated with the disposal of garbage make up approximately 17% of the facility's revenue.

Electricity Generation: The incinerator uses steam to power a 68 megawatt turbine. This electricity is sold to DTE Energy Co. (DTE) and is distributed to customers on the electric grid. According to a Detroit Renewable Power report, electricity sales make up approximately 25% of the facility's revenue.

Steam: The incinerator's combustion of solid waste produces steam as a byproduct, which is distributed to dozens of privately and publicly owned buildings through what is commonly referred to as the "downtown steam loop" for the purposes of heating and cooling a variety of buildings. The Greater Detroit Resource Recovery Authority has concluded that the steam loop could continue to provide steam to customers without the incinerator. Steam sales represent approximately 43% of the facility's revenue.

Air Emissions from the Incinerator

In addition to providing the services described above, the incinerator also is classified as a major source of air pollution by the Clean Air Act. As described in Table 2, the incinerator emitted hundreds of tons of carbon monoxide, nitrogen oxides, sulfur dioxide, and particulate matter in 2016.

Many of the pollutants emitted by the incinerator are regarded as "criteria pollutants" under the Clean Air Act and create negative health impacts for people living nearby the facility. Common health impacts from criteria air pollutants include both respiratory health impacts, with children and asthmatics being particularly vulnerable, and cardiovascular health impacts, with seniors being particularly vulnerable. The facility has exceeded its air quality standards regarding criteria pollutants hundreds of times over the past few years. In addition to "criteria pollutants," burning garbage also causes the emission of numerous hazardous air pollutants such as cadmium, chromium, lead, mercury, and dioxins and furans. Many of these hazardous air pollutants are classified as known or probable carcinogens by the U.S. Environmental Protection Agency. Violations of air emission limits were the subject of a 2017 enforcement action brought by the Michigan Department of Environmental Quality. Lastly, the incinerator creates strong odors. The Michigan Department of Environmental Quality has repeatedly found that these odors present an unreasonable interference with the use and enjoyment of property for residents living nearby the facility. These issues were the subject of a 2014 consent judgment, but despite that consent judgment odor violations have continued.

Neighborhood Around the Incinerator

According to the U.S. Environmental Protection Agency, approximately 21,927 people live within a 1.5-mile radius of the incinerator. Of those people, 76 percent are people of color and 71 percent are low-income. There are 13 schools within that 1.5-mile radius. The playground of the Golightly Elementary school is approximately 1,300 feet from the incinerator.

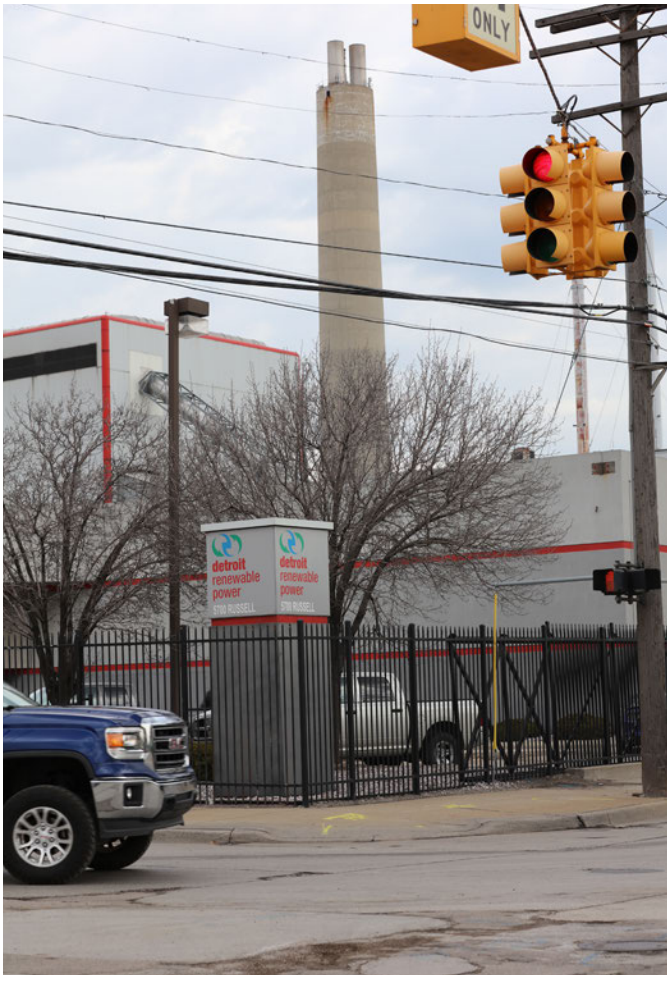
1. CONSTRUCTION AND DESIGN OF THE INCINERATOR

IN 1975, THE CITY OF DETROIT ESTABLISHED A RESOURCE RECOVERY TASK FORCE, WHICH WAS led by the Department of Public Works, to find a suitable site for a solid waste incinerator.[1] At the time, the city of Detroit wanted to find a long-term solution for its solid waste disposal needs. It was hoped that building a publicly-owned incinerator would provide long-term economic stability and predictability regarding solid waste disposal. A publicly-owned incinerator would allow Detroit to avoid paying increased disposal fees, which were predicted to result from a shortfall in landfill capacity by 1990.[2]

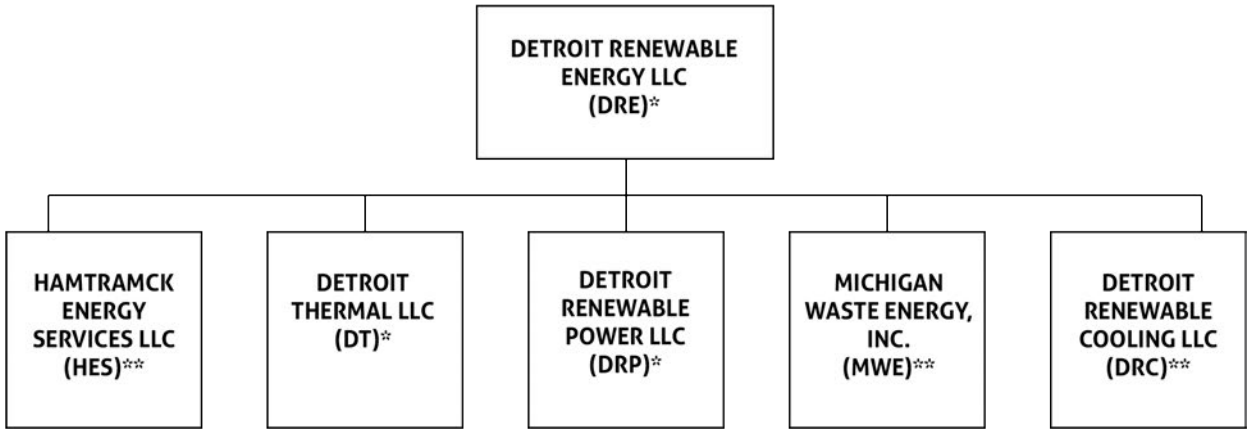
In 1978, the Task Force identified the site at 5700 Russell Street as the preferred location and selected a proposal for the design of the incinerator.[3] However, numerous obstacles impeded the construction of the incinerator. First, the city had to negotiate for the construction and operation of the facility. High interest rates in the early 1980s also put the financing of the project in peril. However, in May of 1986, bond financing for construction in the amount of $438 million was approved and construction commenced soon after.[4]

The facility was initially constructed and operated by Combustion-Engineering, Inc. and owned by the city of Detroit. Its design and basic functions have remained largely unchanged since its construction. Waste is received at a 4,000-ton tipping floor. From there, it is fed into one of three identical processing lines where it is shredded into refuse derived fuel (RFD). Once processed, it is conveyed to a 3,600-ton RFD storage area. From there, RFD is conveyed from the secondary storage area to one of three boilers for incineration. Each boiler is a waterwall unit, which means that each boiler is lined with a layer of water that converts to steam during operation. The steam produced during incineration is used to power a 68 megawatt turbine generator and is diverted for distribution to the steam loop for heating and cooling purposes.[5]

It is important to note that even at its construction, the facility was designed to process about 850,000 tons per year, which was in excess of the 650,000 tons of waste produced by Detroit at the time.[6] The belief was that the additional capacity would be an asset for the city of Detroit, which initially owned the facility, since that excess capacity could represent additional revenue for the City and cost savings if



solid waste disposal costs rose in the future.[7]
In October of 1991, the city of Detroit sold the incinerator to private owners.[8] However, the city still owns the land on which the incinerator sits. It leases the land to the Greater Detroit Resource Recovery Authority, who subleases it to the owners of the incinerator. The corporate structure associated with the incinerator consists of an umbrella limited liability company, which is Detroit Renewable Energy LLC, with several subsidiary limited liability companies operating under its complete control, including Detroit Renewable Power LLC, which owns the incinerator, and Detroit Thermal LLC, which owns the steam distribution system. Detroit Renewable Energy LLC, the umbrella company, has been owned by a variety of private owners since the city of Detroit sold the facility in 1991. In 2010, Atlas Holdings and Thermal Ventures purchased the facility. Now, in 2018, a sale has been finalized to transfer ownership of the Detroit Renewable Energy LLC and all of its subsidiary companies to Basalt Infrastructure Partners and DM Energy Partners LLC.



2. SERVICES OF THE INCINERATOR

BASED ON ITS OPERATIONS AS DESCRIBED ABOVE, THE INCINERATOR PROVIDES THREE primary, revenue-generating services: the disposal of solid waste; the distribution of steam for heating and cooling via the downtown steam loop; and the distribution of electricity.

a. Solid Waste Disposal

According to a directory of waste-to-energy incinerators prepared by the Energy Recovery Council, which is a national association of owners and operators of waste-to-energy facilities in the United States, the Detroit incinerator can burn the most garbage per day of any incinerator in the country.[9] The incinerator is permitted to process 20,000 tons of garbage per week and 1,043,000 tons per year.[10] The amount of waste received by the incinerator varies, but is generally around 800,000 tons per year.[11] According to reports submitted by the owners of the incinerator to Wayne county, in 2017 the incinerator received 822,579 tons of waste and incinerated 789,933 tons of the waste that it received.[12] Based on these figures, the Detroit incinerator is the fifth largest solid waste disposal facility in the state regarding the amount of waste it receives.[13]

Detroit sends about 217,000 tons of solid waste to the incinerator, which is approximately 25% of the total amount of solid waste received by the incinerator in a given year.

From 2015 through 2017, the incinerator received trash from thirteen Michigan counties, as well as Canada, Ohio and Illinois.[14] According to invoices sent by the owners of the incinerator to the Greater Detroit Resource Recovery Authority, Detroit sends about 217,000 tons of solid waste to the incinerator, which is approximately 25% of the total amount of solid waste received by the incinerator in a given year.[15]

The owners of the incinerator have contracts with many municipalities for the disposal of solid waste. Per their contract with the Greater Detroit Resource Recovery Authority, Detroit is obligated to pay $25.00 per ton of solid waste disposed of at the facility.[16] This contract expires in October 2021. The Grosse Pointes collectively pay $15.50 per ton per a contract that expired at the end of 2017.[17] Warren pays $15.00 per ton per a contract that is set to expire in January 2019.[18] According to a report from 2013, fees associated with the disposal of garbage make up about 17% of the Detroit Renewable Energy's revenue.[19]

b. Electricity Generation

Steam produced by the incinerator's boilers is used to power a turbine that has a nameplate capacity of 68 megawatts. This electricity is sold to DTE. Additionally, the Michigan Clean and Renewable Energy and Waste Reduction Act regards municipal solid waste incineration as a renewable energy resource that is eligible for renewable energy credits.[20] As such, the incinerator receives one renewable energy credit for each megawatt of electricity that it produces. The incinerator sells all of its renewable energy credits to DTE for $7.00 per renewable energy credit pursuant to a renewable energy credit purchase agreement.[21] According to reports submitted by the incinerator, electricity sales make up approximately 25% of the facility's revenue.[22]

c. Steam Sales

Most of the incinerator's revenue comes from its steam sales, which is formally done by Detroit Thermal. Both Detroit Renewable Power, the company which owns the incinerator, and Detroit Thermal, the company which owns the steam loop, are under common ownership. According to Detroit Thermal, its steam system serves 85 customers in the downtown area.[23] Detroit Thermal, as a public utility, is regulated by the Michigan Public Service Commission. As a public utility, Detroit Thermal provides steam to customers either in accordance with the terms of a special contract negotiated with the customer or in accordance with the terms specified in Detroit Thermal's steam tariff. According to Detroit Thermal, approximately 13 customers have special contracts and 72 customers are served according to the general terms of its steam tariff.[24]

Steam sales make up approximately 43% of the incinerator's revenue.

According to a 2013 report, Detroit Thermal's tariff customers have included large entities such as Henry Ford Hospital. Detroit Thermal charges its tariff customers varying rates based on the volume of steam they consume. According to its tariff, small volume customers generally pay a higher rate than high volume customers. The prices for special contracts vary. Currently, the following organizations receive steam from the incinerator via a special contract.
The special contracts referenced in Table 1 have varying terms, including the price for steam provided and the length of the special contract. According to reports submitted by Detroit Thermal, steam sales make up approximately 43% of the incinerator's revenue.

Steam is released along the steam loop displaying the inefficiency of the system.

TABLE 1 **Companies and Buildings Served In Accordance With Special Contracts for the Purchase of Steam from Detroit Thermal**

Company	Buildings
Bedrock Management Services	• One Woodward • First National Building • Chase Building • One Detroit Center • Federal Reserve
Detroit Wayne Joint Building Authority	• Coleman A. Young Municipal Center • Old Wayne County Jail Annex • Frank Murphy Hall of Justice • Baird Detention Facility • Old Juvenile Court
Detroit Regional Convention Facility Authority	• Cobo Hall
Becton, Dickinson, and Company	• 920 Henry St.
Detroit Medical Center	• Children's Hospital of Michigan • Detroit Receiving Hospital & University Health Center • Harper Hospital • Harper Hospital Cancer Center • Harper Hospital Apartments • Harper Hospital – Professional Office Building • Hutzel Hospital • Rehabilitation Institute of Michigan • Detroit Medical Center Cardiovascular Institute
Riverfront Holdings	• Renaissance Center, Towers 500 and 600
Wayne State University	• Eugene Applebaum College of Pharmacy and Health Science Building
Wayne State University	• Gordon H. Scott Hall • Helen Vera Prentis Lande
Woodward SA-ZK LLC	• 3901 Woodward
Federal Government, General Services Administration	• Theodore Levin U.S. Courthouse
Federal Government, General Services Administration	• Patrick V. McNamara Federal Building
Blue Cross Blue Shield	• 600 and 500 Lafayette

3. AIR QUALITY AND THE INCINERATOR

THE POLLUTANTS THAT ARE EMITTED FROM THE INCINERATOR CAN BE BROKEN DOWN INTO two broad categories: "criteria pollutants" and "hazardous air pollutants." Criteria air pollutants are air pollutants that are commonly present in all environments. They can irritate airways, harm the respiratory system, aggravate respiratory diseases such as asthma, contribute to wheezing, and cause breathing difficulties that result in hospitalization. Long-term exposure to criteria air pollutants may contribute to the development of asthma and increased susceptibility to respiratory infections. Children and the elderly are the most susceptible to these health effects. The specific criteria air pollutants that the incinerator emits are particulate matter, sulfur dioxide, nitrogen oxides, and carbon monoxide. Hazardous air pollutants are toxic air pollutants that are commonly classified as probable or known carcinogens. The specific hazardous air pollutants emitted by the incinerator are cadmium, chromium, lead, mercury, and dioxins and furans. Many volatile organic compounds are considered hazardous air pollutants.

Long-term exposure to criteria air pollutants may contribute to the development of asthma.

The major sources of air pollution from the incinerator are the pollutants that result from the burning of garbage at its three boilers. According to the Michigan Air Emissions Reporting System, the incinerator's boilers emitted the following tons of criteria pollutants in 2016.

The incinerator is regarded as a major emitting facility pursuant to the federal Clean Air Act. As such, it is required to obtain and operate in compliance with the standards contained in its Renewable Operating Permit. This permit must be renewed every five years by the Michigan Department of Environmental Quality. In general, the

Renewable Operating Permit serves as a clearinghouse for all of the air quality regulations that apply to the incinerator. These regulations set air emissions limits and air quality monitoring requirements for the incinerator.

The incinerator's renewable operating permit contains emission limits for particulate matter, cadmium, hexavalent chromium, total chromium, lead, mercury, dioxins and furans, hydrogen chloride, sulfur dioxide, total fluoride, carbon monoxide, volatile organic compounds, and nitrogen oxides. Emissions from each boiler are controlled by a dry scrubber and a baghouse, which captures pollutants. Emission monitoring requirements vary based on the pollutant. The incinerator is required to continuously monitor its emissions for some pollutants with continuous emission monitoring systems. These systems provide the incinerator and the MDEQ with continuous air emission data to ensure that the facility is complying with emission limits. Alternatively, the incinerator is required to conduct an annual stack test to verify emission levels for other pollutants.

TABLE 2 **Total Air Emissions in Tons from All Three Incinerator Boilers in 2016**

	Carbon Monoxide	Nitrogen Oxides	Particulate Matter	Sulfur Dioxide	Volatile Organic Compounds
Total Emissions in tons per year	367 tons	1,245 tons	50 tons	146 tons	34 tons

TABLE 3 **Number of Exceedances of Air Emission Limits & Number of Odor Violation Notices Issued by MDEQ– 2013 through 3rd Quarter of 2017**

Year	1-Hr. Carbon Monoxide Limit	24-Hr. Carbon Monoxide Limit	24-Hr. Nitrogen Oxide Limit	24-Hr. Sulfur Dioxide Limit	MDEQ Odor Violations
2013	55	0	6	0	0
2014	69	0	0	0	17
2015	266	3	0	4	5
2016	169	6	5	2	17
2017	109	3	5	0	9
Total	668	12	16	6	48

The incinerator must monitor sulfur dioxide, nitrogen oxides, and carbon monoxide with continuous emission monitoring systems. For all other pollutants, including particulate matter, the incinerator generally must conduct an annual stack test to determine emission amounts and compliance.

The incinerator has regularly exceeded numerous different emission limits that it is required to follow in accordance with the terms of its renewable operating permit and federal regulations. Since the start of 2013, the incinerator has exceeded emission limits over 700 times. In 2017, the MDEQ penalized Detroit Renewable Power for 6 alleged violations of emission limits and assessed a $150,000 penalty.

Since the start of 2013, the incinerator has exceeded emission limits over 700 times.

As illustrated in Table 3, the incinerator most frequently violates its 1-hour carbon monoxide emission limit, which is 267 parts per million based on a 1-hour average. The incinerator monitors its carbon monoxide emissions with a continuous emissions monitor. According to the EPA, carbon monoxide emissions are a good indicator as to whether the incinerator is adequately combusting garbage, which is important because the inadequate combustion of garbage can cause elevated emissions of hazardous air pollutants.[25]

Specifically, inadequate combustion may cause increased emissions of metal oxides or vapors and metal vapors.[26] Additionally, the incomplete combustion of plastics can cause the emission of hazardous substances such as dioxins.[27] The incinerator is only required to conduct annual stack tests for these hazardous air pollutants. Therefore, the 1-hour carbon monoxide standard is important to ensure that the incinerator is adequately combusting its garbage and is not causing increased emissions of hazardous air pollutants such as dioxins. Additionally, due to a malfunction in its pollution control technology, the incinerator experienced a prolonged violation of its particulate matter standard.

ents provide the phone number to call MDEQ with odor complaints.

While a stack test conducted on December 2, 2015 revealed that particulate matter emissions were in violation of the applicable air pollution standard, the incinerator did not fix its pollution control technology to stop the violation until February 20, 2016. During this time, it regularly operated its facility, which resulted in excessive amounts of particulate matter being emitted into the nearby community.

The incinerator also regularly causes strong odors, which are generally caused by trash stored by the facility prior to incineration. The Michigan Department of Environmental Quality has determined that odors released from the facility have violated Michigan Rule 336.1901 prohibiting the "...unreasonable interference with the comfortable enjoyment of life and property" for nearby residents.[28] As a result, MDEQ has issued 48 odor violation notices to the incinerator's owners since the start of 2014, as detailed in Table 3.

Odors from the incinerator continue to violate the terms of its renewable operating permit.

In 2014, Michigan negotiated a consent judgment with the owners of the incinerator to penalize the owners of the incinerator for its odor violations and to require it to take additional measures to control its odor. However, despite the consent judgment, odors from the incinerator continue to violate the terms of its renewable operating permit and enforcement of those odor violations by the Michigan Department of Environmental Quality is ongoing.

4. NEIGHBORHOOD SURROUNDING THE INCINERATOR

THE NEIGHBORHOOD SURROUNDING THE INCINERATOR IS DENSELY POPULATED WITH several schools. According to the U.S. Environmental Protection Agency's EJSCREEN tool, approximately 21,927 people live within a 1.5-mile radius of the incinerator. Of those people, 76 percent are people of color and 71 percent are low-income people. Additionally, there are approximately 13 schools within a 1.5-mile radius of the incinerator. The closest school is Golightly Elementary, which is approximately 1,300 feet from the incinerator.

5. COMMON HEALTH EFFECTS CAUSED BY INCINERATORS

INCINERATORS COMMONLY EMIT A NUMBER OF POLLUTANTS, PARTICULARLY WHEN THEY inadequately combust garbage. The particular pollutants of concern are carbon monoxide, nitrogen oxides, sulfur dioxide, hydrochloric acid, lead, mercury, chromium, arsenic, beryllium, dioxins and furans, PCBs, and polycyclic aromatic hydrocarbons, as these pollutants can have a significant health impact on the people living near the incinerator.[29]

These pollutants can have a significant health impact on the people living near the incinerator.

A study recently found that carpet dust samples collected from homes near municipal solid waste incinerators commonly have higher concentrations of dioxins and furans than the average home, suggesting that residents living nearby the incinerator may be subject to increased levels of dioxin exposure.[30] Dioxins and furans are a family of toxic substances, with 2,3,7,8-TCDD being considered the most toxic.[31] Long-term, chronic exposure to dioxins and furans has been linked to the impairment of the immune system, the developing nervous system, and reproductive functions.[32]

These results correspond with the results of another study, which found an association between exposure to incinerator air pollution and pre-term births.[33] Complications related to preterm birth are among the main indirect causes of neonatal mortality, mortality in children under 5 years old, and long-term disability.[34]

6. CONCLUSION

LOCATED AT THE INTERSECTION OF I-94 AND I-75, THE INCINERATOR IS ONE OF THE largest solid waste disposal facilities in the state. It has served the disposal needs of over a dozen Michigan counties as well as Canada, Illinois, and Ohio. Due to a long-term contract, Detroit pays an elevated disposal fee of $25 per ton while other communities such as Grosse Pointe and Warren generally pay $15 per ton. The incinerator also creates a number of negative externalities primarily in the form of odors and air pollution. Since 2014, the incinerator has consistently struggled to control its odors. Additionally, starting in 2015 the incinerator has consistently struggled to keep its air pollutant emissions below its emission limits. The odors from the incinerator have regularly been a nuisance for local residents living nearby the incinerator, particularly in the summer months. Numerous studies have also found that air pollution from municipal waste incinerators may cause elevated levels of toxic substances, such as dioxins and furans, which have been associated with serious negative health effects.

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Date	VN #	RVN #	US Ecology Summary Response and/or Cause	Non-odor complaint VN					
				Odor complaint VN			More information required		
4/14/2014	VN_20140414	RVN_20140512	active steam generated from Vault 706 due to the dumping of a concentrated sulfuric acid load into water in order to neutralize the acid strength.						
5/22/2014	VN_20140522	RVN_20140619	EQD believes the above observation made on May 21, 2014 is inaccurate and does not constitute violations of the legal requirements cited. Because there was no immediate contact with EQD, there is no way to confirm the odor was coming from our site and there is no way of investigating the odor that you, alone, detected. Moreover, as the observed event occurred during normal business hours, EQD would expect that their site would be immediately contacted by the MDEQ and requested to abate the condition giving rise to any observed nuisance odor.	denied					
6/23/2014	VN_20140623	RVN_20140707	As previously indicated, at the time of the AQD observed event on May 21, 2014, both the EQ Director of Operations and the QEHS Manager were conducting an internal facility audit and did not detect strong odors which they could attribute to facility operations. As the facility was not made aware until the following day of any issue, the facility did not have the opportunity on May 21 to corroborate the perceptions of the AQD and investigate possible causes of a problem which may have existed at the time at the facility. AQD has requested information on waste processed on the day in question. Records as maintained by the facility of waste streams processed on May 21, 2014 (Process Batch Analysis) are enclosed with the hard copy of this letter.2 The facility has examined these records and has not identified anything which it would consider atypical as compared to wastes processed on any other day.	repeat					
8/25/2015	VN_20150825	No Response document in EGLE system							
10/27/2015	VN_20151012	RVN_20151027	Upon investigation it was noted the winds were coming out of the Northeast and the temperature had dropped significantly from days prior. These conditions will often result in the air from the facility's stack to drop which could result in nuisance odor. Never, at any time, was there an odor onsite at the US Ecology facility. After the initial complaints, the treated material in Vault 703 was capped to mitigate any possible odors. US Ecology worked with DTE to borrow their misting system to provide an environmentally friendly, water-based deodorant used for neutralizing odors into our Chem-Fix building as an additional precaution. The air system was shut down and processing ceased for part of the day to ensure no odors were being emitted.	ID					
8/19/2016	VN_20160721	See below SAR_20160819	Odor testing has not been requested by AQD. However, due to ongoing odor complaints and verified odors in violation of Rule 901, AQD may request testing prior to next inspection if odor complaints continue. At the time of inspection, US Ecology Detroit - South was determined to be in compliance with the Special Conditions of PTI No. 269-04E. However, the facility was determined to be in noncompliance with Rule 901 and General Condition 6 of PTI No. 269-04E for unresolved and ongoing violations of Rule 901.	denied					

8/19/2016	VN_20160803	SAR_20160819	COMPLAINT/COMPLIANCE HISTORY: The facility has a long history of odor issues dating back to 1995. Since the last inspection on August 27, 2015, the facility has been issued three Violation Notices, dated October 12, 2015, July 21, 2016, and August 3, 2016, for emitting nuisance odors in violation of Rule 901. These odors are suspected to be associated with the waste stabilization/solidification process. At the time of inspection, the outstanding violation notices were unresolved and the facility was considered to be in noncompliance with Rule 901. Note: When investigating complaints alleging odors from EQ Detroit, the inspector should also consider Greater Detroit Resource Recycling as a possible source, especially if the complaint is nondescript, or if the odors are described as "rotting" or "garbage". Both sources have potential for off-site odors; however, the odor from each source is distinctly different in character.	repeat					
10/13/2016	VN_20160923	RVN_20161013	Response for 9/20 and 9/23/16 VN. During the time of the company's investigations it was noted that on September 20, 2016, a large volume of rag oil from an onsite wastewater treatment tank cleanout was being dried up. This requires more dust than normal. In addition, US Ecology's typical dust supplier was down. The subsequent dust the company had to purchase can sometimes produce stronger exothermic reactions which in turn can create a fair amount of steam that can mistakenly viewed as solids. This was most likely the cause for the observation. As a result of these violations, however, USEDS has implemented several important changes to minimize the chances of future issues arising from our normal operation.	id					
10/13/2016	VN_20161004	RVN_20161013	See VN_2016023 response	id					
12/14/2016	VN_20161123	RVN_20161214	During the post-incident review, US Ecology was unable to identify any waste streams that would have created an abnormal odor issue. As per the agency's request, the batch reports for November 21, 2016 are provided on disk. The lime odor detected is from the routine solidification of our materials in our Chem-Fix operation. As a result of recent violations, however, USEDS has implemented several important changes to minimize the chances of future issues arising from our normal operation. In addition to the aforementioned newly established procedures and changes, the company has been working with an outside vendor and consultant to develop and implement an odor neutralization system	unable					
2/16/2017	VN_20170126	RVN_2017021	During the post-incident review, US Ecology was unable to identify any waste streams that would have created an abnormal odor issue. As per the agency's request, the batch reports for January 24, 2017 are provided on disk. The lime odor detected is from the routine solidification of our materials in our Chem-Fix operation. As a result of recent violations, however, USEDS is in the final stages of an odor neutralization system. USEDS anticipates the system to be up and running in the next 10-14 days depending on the weather and any unforeseen computer integration issues.	unable					

4/27/2017	VN_20170427	RVN_2017051	On March 8, 2017, southeast Michigan experienced wind speeds in excess of 60 miles per hour. As a result, extensive damage to the company's stabilization building occurred. USEDS worked closely with Rich Conforti on a plan of action to remove waste from the treatment vaults safely and in a timely manner to minimize problems from additional winds and precipitation events. During the planning discussions on March 14, 2017 with both the Waste Management and Radiological Protection division (WMRP) and the Air Quality Division (AQD) to safely remove the remaining solid material from the vaults, you requested that USEDS needed to apply for a temporary Permit to Install. The PTI was approved and the remainder of the waste as well as treatment reagent was removed with the exception of the non-hazardous, primarily liquid Vault 702. Included with this letter is a copy of the timeline of conversations and events that was provided to the MDEQ on March 22, 2017.	id					
8/31/2017	VN_20170815	RVN_20170831	USE-DS had a drum dock worker on site from 5:00pm to 11:00pm on August 13th. The Manager of Chem-Fix checked with the drum dock employee on Monday August 14th to find out if he noticed odors on the evening of August 13th. The employee stated that he did not notice any odors emanating from the facility at any time during his shift. Furthermore, when odor complaints of this nature are identified, it is typically during the solidification process. However, this process was not being conducted during the time of the odor investigation. In conclusion, it is USE-OS's stance that the subject Notice ofViolation be rescinded as thecnuisance odors observed by MOEQ at 9:00pm August 13, 2017 could not be from our facility based on the fact that the process was shut down seven and a half hours prior to the odor investigation and the complainant's location is over a mile from the facility.	denied					
7/11/2018	VN_20180620	RVN_20180711	MDEQ notified Raymond Landsberg, General Manager, at approximately 9:00pm on June 8, 2018. Mr. Landsberg contacted Paul Haratyk, Operations Manager, and Mr. Haratyk contacted the operator on site. The operator was leaving for the night and said the Chemfix building smelled normal. The operator also indicated the last time lime was used would have been between 7:30pm and 8:00pm and that all vaults were treated by 8:45pm. It is USE-OS's stance that the subject Violation Notice be rescinded as the nuisance odors observed by MDEQ are not applicable to the rule cited. the alleged odors were detected by a very small percentage of residents in the area which would not be a situation suggestive of causing "unreasonable interference with the comfortable enjoyment of life and property".	denied					

8/13/2018	VN_20180731	RVN_20180813	Prior to these consecutive Violation Notices (VNs), USE-OS received only two odor VNs in the past year. The most recent being on June 8, 2018 and the one prior to that on August 15, 2017. USE-OS requested a meeting with your office to discuss odors, including, how complaints are reviewed, the efforts that have been taken by USE-OS to reduce odors, what MOEQ's expectations are regarding the subjective language in Rule 901, and what MOEQ would recommend for USE-OS in regard to dealing with the odor violations. The requested meeting took place on August 2, 2018. AQD stated that once an odor complaint is received they will go to the area and investigate (during reasonable hours of the day). If the odor is downwind of the facility, having an odor level of 3 or more at the complainants property even if fleeting or intermittent, and it is consistent throughout the time of the inspection (1-3 hours) then they will issue a violation. It was also noted that the farther away the odor is from the facility the more likely they will issue a violation. This RVN had some good discussions and I have saved and will include in the information I summarize and provide.	unable					
8/13/2018	VN_20180808	RVN_20180813	See VN_20180731	unable					
10/9/2018	VN_20180920	RVN_20181009	There were several questions from RWDI on the odor survey approach which led to a request for a second meeting with MOEQ. The second meeting took place on August 31, 2018. In Mr. Bergeron's presentation he noted that the one drawback to conducting an odor survey is the lack of scientific/numerical limits, or guidelines available. MOEQ's odor threshold is very subjective where some areas, such as Ontario and other parts of the US, have a numerical limit associated with odors. MOEQ also commented on how they would like Michigan to have numerical limits for odor but know that is not something that will happen in the short-term. This RVN also had good discussions about an odor survey and what that entails so I have also saved it.	denied					

9/19/2019	VN_20190909	RVN_20190919	This recent letter is the first odor VN that USE-DS has received since September of 2018. Therefore, it has almost been a year since the last odor VN. In the past year, USE-DS hired a consultant (RWDI Consulting Engineers out of Winsor, ON) to conduct an odor survey to help inform the company's assessment of odors that may be associated with its operations. the results of the odor survey and a letter outlining potential improvement projects were submitted to EGLE's attention on May 29, 2019. With respect to the specific events referenced in the VN, a resident contacted me regarding odors from the facility at approximately 6:30pm on August 28, 2019. I immediately drove to the resident's home and met with them outside for about an hour. Except for two nonconsecutive periods lasting for approximately a minute each time, there were no odors present . In response to the August 27, 2019 and August 28, 2019 odor VN, USE-OS also completed a review of the days in question and found that applicable equipment was functioning properly and no unusual odors were identified by personnel proximate to the site. One of the projects outlined in the "Follow-up to April 26, 2019 Odor Survey Results Meeting" letter submitted to your office on May 29, 2019, was to evaluate Forecast Meteorology software and the possible installation of a meteorological tower on site to work in conjunction with the software. The software would be set up based on the identification of operations which are susceptible to weather.	unable					
5/13/2020	VN_20200422	RVN_20200513	This VN response is intended to help facilitate upcoming discussions of the facility's operations in a joint meeting with EGLE's AQD and MMD personnel. USE-DS hopes to gain a better understanding of how AQD intends to apply Rule 901(b), how USE-DS personnel can coordinate with AQD field personnel to better understand its real-world application of the Odor Intensity Scale as well as the other elements of a 901(b) assessment and, ultimately, what additional reasonable steps USE-DS can take to address AQD' s concerns and further our company's commitment to being a responsible corporate citizen and a good neighbor. USE-OS believes the difference between the 901(a) public nuisance claim and the 901(b) private nuisance claim at issue here is an important distinction for consideration when analyzing both the facility's administrative record as well as the methodology being used by AQD to establish what it believes constitutes an unreasonable interference with a particular property owner's use and enjoyment of their property. A lot of detailed discussion so this RVN will be saved. In response to the March 20, 2020 odor VN, USE-DS also completed a review of the day in question and found that applicable equipment was functioning properly. An odor drive of the neighborhood was completed immediately following a call from EGLE by USE-DS's General Manager and the Chemfix Operations Manager. They identified the lime odors noted as the basis of the VN intermittently in the parking lot of the facility but could not detect the odors in the neighborhood of the complainant identified by EGLE.	unable					

7/13/2020	VN_20200622	RVN_20200713	USE-DS immediately evaluated the wastes present in the vaults at the time of the odor complaints and identified three non-hazardous waste approvals from Vault 702 whose waste description indicated a potential for odor contribution. While these three nonhazardous wastes had cleared their initial odor screening in the laboratory, the waste description identified herbicide and pesticide process rinsates. Based on review of product SOS, the potential for petroleum or musty odor was possible. Out of an abundance of caution and in response to the odor complaints and corresponding Violation Notice, these three waste approvals have been changed to 'not acceptable for on site for treatment'. These wastes will only be acceptable for "transshipment to another facility". These actions have already been taken and therefore considered to be closed.	id					
9/14/2020	VN_20200824	RVN_20200914	USE-DS does not agree with AQD personnel's determination that a Rule 901(b) violation occurred based on the brief detection of odors at St. Aubin and E. Warren. Rule 901(b) is supposed to address the "unreasonable interference with the comfortable enjoyment of life and property" experienced by a property owner at their location. AQD's own internal guidance on the application of Rule 901(b) requires that an investigation document that the intensity of the odor, as well as the duration of the experience, and the frequency with which it impacts a property owner all be documented in support of a violation. .In this case, odors were detectable for a brief period of time and the location AQD offers as the basis for finding an unreasonable interference with someone's property rights is not at the location of the complaint, but rather just across a vacant field from the facility's fence line. USE-OS is greatly concerned · with the method AQD has developed for responding to Rule 901(b) complaints. AQD's approach seems to include driving all around the neighborhood, whether located near the residence alleging a nuisance or not, in search of even an intermittent odor with no regard for the location or duration of detection to justify alleging that a nuisance condition has been established	denied					
9/17/2020	VN_20200917	RVN_20181009	USE-DS requested a meeting with your office to discuss odors, including, how complaints are reviewed, the efforts that have been taken by USE-DS to reduce odors, what MDEQ's expectations are regarding the subjective language in Rule 901, and what MDEQ would recommend for USE-DS in regard to dealing with the odor violations. The requested meeting took place on August 2, 2018 (attendees included: Jon Lamb MDEQ, Todd Zynda MDEQ, Dan Belisle USE, Raymond Landsberg USE-DS, and Tabetha Peebles USE-DS). The meeting concluded with AQO recommending USE-DS have an odor evaluation conducted. As suggested, USE-OS solicited the help of a contractor and met with RWDI Consulting Engineers out of Winsor, ON on August 13, 2018. There were several questions from RWDI on the odor survey approach which led to a request for a second meeting with MDEQ. The second meeting took place on August 31, 2018 (attendees included: Raymond Landsberg USE-DS, Tabetha Peebles USE-DS, Brad Bergeron RWDI, Jon Lamb MDEQ, and Todd Zynda MDEQ). Brad Bergeron presented information on conducting an odor survey to MDEQ.	unable					

10/27/2020	VN_20201027	RVN_20201116	A call was received by USE-DS personnel from EGLE at 10:00 pm on October 15th, informing USEDS that EGLE was investigating a complaint at Farnsworth and Elwood Streets. EGLE stated that lime chemical odor was detected. The field investigator decided odors were sufficiently intense to support a violation of Rule 901(b). The treatment of waste ceased at 9:00 pm, the operator left the site at 9:15 pm and drove around the area at 9:20 pm, but did not detect any odors. Additional odor evaluations took place earlier in the evening, around 7:30 pm. Please note that USE-DS has been diligent in removing any potentially odorous materials from the waste treatment process, and any of the odors that may have been detected were the normal and customary odors indicative of complying with 40 CFR 268.42 - Treatment Standards Expressed as Specified Technologies for stabilization. In order to enable USE-DS to respond most effectively to odor concerns, we ask that AQD field personnel make every effort to notify me as soon as possible with all essential details when any odor complaint potentially relating to USE-DS is received. This will allow USE-DS to immediately investigate and potentially respond to the complaint and report the results.	denied						
12/7/2020	VN_20201207	RVN_20201218	A call was received by USE-DS personnel from EGLE at 12:30 pm on Friday, November 20th, informing USE-DS that EGLE was investigating an odor complaint. USE-DS personnel immediately conducted an odor survey of the area, met the EGLE Inspector and detected odor under ambient conditions. A device known as a scentometer was used by USE-DS personnel to determine the level of odor. The scentometer is a device with a carbon filter that allows for increments of dilution of the suspected odorous air. The amount of dilution required to smell the odor is the basis for the scale. Utilizing the scentometer, odors could not be detected at the dilution level of two (the State of Illinois allows up to a dilution level of 8). At the time of this complaint, EGLE found what they considered to be level 4 odors in the same area. Note that the level 4 identified by EGLE is a subjective evaluation. USE-OS and EGLE identified two very different experiences in the same general area and, furthermore, using two very different scales. One scale being objective and the other subjective. In an effort to reduce the subjectivity of evaluating odors, USE-DS has purchased and completed training on a device called a scentometer that is a commonly used tool in the assessment of odorous conditions. USE-DS would like to request EGLE's participation in conducting a side-by-side review of the scentometer to establish a consistency for evaluating odors. In the event the use of the scentometer is found to have the same results in the side-by-side comparison, USE-DS asks that EGLE will consider the use of the device for odor evaluations and establish a level to be considered a violation of Rule 901(b).	denied						

7/28/2021	VN_20210726	RVN_20210813	USE-DS did a thorough evaluation of the daily operating records for the dates noted in the Violation Notice and only identified two days that the ORP reading was not documented when the oil recovery process was operational. Therefore, in response to the missing documentation, personnel have been refreshed on the need to ensure all sections of the form are filled out Also, for ease of records review in the future, a check box will be added to note if treatment is taking place (steam generator operating). Additionally, if the ORP and/or pH probe is out of service and a reading is not available, the operators will manually pull a sample from the scrubber and take the required reading with an external probe.	id					
10/7/2021	VN_20211007	RVN_20211028	A call was received by USE-DS personnel from EGLE at 8:37pm on Thursday, September 23rd informing USE-DS that EGLE was investigating several odor complaints. USE-DS personnel conducted an odor survey of the area and detected faint, fleeting odors under ambient conditions. The odors were not persistent enough to utilize the scentometer. Potential Root Cause The treatment process is a chemical reaction that can liberate odors from the process. To reduce odors, the drying time has been increased, which is essentially slowing the chemical reaction and consequentially reducing odors. On the evening of September 23, 2021, the operator which normally completes this process was on vacation and another operator was filling in. There is no way to definitively determine if this is the cause of the odors but based on the evaluation of the events of the day and evening this is the only potential root cause. Therefore, additional training will take place to ensure the practice of increasing the drying time. They then list all of the steps they've taken over the years.	ID					

11/1/2021	VN_20211101	RVN_20211119	10/18/21 - In this case the intensity of the odor was not at a level in which the scentometer could be used and therefore the odor level was lower than the lowest dilution level of two (the State of Illinois allows up to a dilution level of 8). To reduce the odors, the fan speed on the dust collection system was turned down. This action seemed to help according to USE-DS personnel evaluations and the fan speed was left in this lower state. The following evening of October 19, 2021, additional complaints were received and EGLE completed an evaluation after 11:30 pm. The processing of the waste was concluded three hours earlier at 8:30 pm. The operators reported that there were no unusual reactions or odors in the building or outside the facility. The fan speed was in the lower state and increased the following morning as the change did not seem to be helping the odors in the area based on the residential complaints. 10/26/21 - USE-DS personnel found that t'he odor was from an epoxy resin waste being processed in the Chem Fix building. Upon receipt of the epoxy resin waste, procedures were followed to evaluate the odor of the waste stream prior to processing. At the time of the evaluation, experienced personnel determined the waste stream was not too odorous for processing. Additionally, since approximately a thousand 55-gallon drums, thirteen hundred 5-gallon buckets, and one hundred 300-gallon totes of the epoxy resin waste have been processed without incident since 2015, the waste was cleared for processing. Note that at the time of these complaints, the epoxy resin waste was in the batch and processing had ceased. In this case, the screening of the waste stream prior to processing did not catch the odorous material. However, the process of evaluating the waste stream has been extremely effective in the reduction of odors from the process over the past year. Currently, there are no changes needed to the odor evaluation of waste streams.	ID						
From the most recent RVN - Summary of what USE-DS notes as their actions to abate odor complaints										
Actions Taken by USE-DS In response to this and previous odor violations, USE-DS continues to take the corrective actions below: • Prior to acceptance of a waste stream on-site, the customer must provide USE-DS with details on the waste stream. The preapproval of waste streams is evaluated with more stringent criteria to identify potential odor issues before approving a customer's waste. Waste streams are not approved, at times, solely due to the potential odorous properties. • Screening of samples for odors is a continuous process at the site. Once the waste stream arrives on-site, a sample is pulled for evaluation. If operations or laboratory personnel determine the sample of a waste stream may be too odorous, the waste stream will not be accepted on-site for treatment. Consequently, the waste will be rejected back to the customer or transshipped to another location. • Once a waste stream is identified as odorous, these waste streams are no longer treated on site. The approvals for these wastes have been changed to 'not acceptable on-site for treatment' or 'transshipment to another facility.' • As waste streams are identified as containing ammonia and amines, they are evaluated to determine if they should continue to be received on-site for treatment. This has, and continues to, reduce the volume of ammonia and amines waste streams received for treatment. • The treatment process is a chemical reaction that can liberate odors from the process. To reduce odors, the drying time has been increased, which is essentially slowing the chemical reaction and consequentially reducing odors.										

been increased, which is essentially slowing the chemical reaction and consequentially reducing odors.
• Frequently the odor associated with the treatment process is from the reagents, such as lime, used to bind and dry the waste for landfill disposal. The volume of these reagents has been reduced when treating non-hazardous waste streams.
• Treatment of the waste streams occurs in batches. Another tactic taken to reduce odors is reducing the batch size. Ideally, this minimizes odors as well.
• To understand the treatment process and odor production from the process, the temperature of the vaults is being logged daily to determine if there is a correlation between odor complaints and higher temperature vault activity.
• The weather conditions are also considered. The wind direction is reviewed daily as part of operation's odor evaluation. The direction of the wind is an indicator of where odors may travel and the potential receptors downwind of the site. When the humidity is higher, it traps the odor and causes it to travel farther and linger longer. Also, high winds have been found to contribute to odor complaints off-site. Operations personnel use this information to make operational decisions to further reduce the potential to impact nearby receptors. Treatment is rescheduled as appropriate.
• Personnel conduct odor evaluations each day the facility is operating in the morning and in the evening. The evaluations are completed between 7:00 am to 9:00 am and again between 7:00 pm to 9:00 pm. If odor is detected, a scentometer is utilized to determine the level of odor detected.
• USE-DS has an on-site initiative to encourage personnel to "say something if they smell something." This initiative has led to earlier investigation of the potential for off-site odors and efforts to remedy the odors before they contribute to any off-site impact.

Non-odor complaint VN
Odor complaint VN
More information required

VN_20140414.pdf – April 14, 2014

During the inspection, staff observed the following:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	PTI No. 269-04D; EUTREATMENT, SC III.3	Failure to maintain negative pressure in Chem-Fix building, allowing particulate emissions to escape building.
Chem-Fix	Act 451, Rule 301	Particulate emissions greater than 20%; highest 6-minute opacity was 63%.

During this inspection it was noted that EQ Detroit Chem-Fix process was emitting opacity in excess of emissions allowed by Act 451, Rule 301.

Response: M4545_RVN_20140512

VN_20140522.pdf - May 22, 2014

AQD staff, Jonathan Lamb, performed the investigation and observed the following violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R336.1901(b)	Strong (Level 3) chemical and fertilizer-type odors observed emitting from the facility and impacting the neighborhood downwind.

Response: RVN_20140619.pdf

VN_20140623.pdf – June 23, 2014

On May 22, 2014, the AQD sent the company a Violation Notice citing a violation of Rule 901(b) discovered as a result of the investigation and requested your written response by June 12, 2014, which was later extended to June 19, 2014, at EQ Detroit's request.

EQ Detroit's response was received on June 19, 2014. After reviewing the letter, AQD has determined that EQ Detroit's response did not adequately address the violation cited in the Violation Notice issued on May 22, 2014. A copy of that letter is enclosed for your reference. AQD is requesting that EQ Detroit resubmit its response to the May 22, 2014, letter. As part of the response, please include information on all wastes processed on May 21, 2014, including waste identification, generator, and times processed.

Response: RVN_20140707.pdf

VN_20150825.pdf – August 25, 2015

Mr. Todd Zynda of the AQD performed the investigation and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04E; General Condition 6	Strong (Level 4) lime dust odors observed emitting from the facility and impacting the neighborhood downwind.

During the investigation of August 20, 2015, Mr. Zynda detected strong lime dust odors in residential areas downwind of the facility which were traced back to U.S Ecology.

No Response document in EGLE system

VN_20151012.pdf – October 12, 2015

During the evening of September 29, 2015, I detected very strong mercaptan odors downwind of the facility while driving on the Lodge Freeway near the New Center/Midtown areas. An investigation by DTE, in response to several hundred complaints received that night and early morning reporting natural gas leaks, determined that the mercaptan odors were caused by operations performed at U.S. Ecology, which was later confirmed by representatives of U.S. Ecology. As a result, U.S. Ecology is being cited for the following violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04E; General Condition 6	Very strong (Level 5) mercaptan odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: VN_20151027.pdf

VN_20160721.pdf – July 21, 2016

Mr. Todd Zynda of the AQD performed the complaint investigation and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b); PTI No. 269-04E, General Condition 6	Strong (Level 4) lime dust and chemical-type odors, attributable to U.S. Ecology Detroit South's operations and impacting areas downwind of the facility.

Response: See below SAR_20160819.pdf

VN_20160803.pdf – August 3, 2016

Mr. Todd Zynda of the AQD performed the complaint investigation from approximately 7:45 PM to 8:45 PM on July 22, 2016, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b); PTI No. 269-04E, General Condition 6	Moderate to Strong (Level 3 and 4) lime dust and chemical-type odors, attributable to U.S. Ecology Detroit South's operations and impacting areas downwind of the facility.

No response letter in EGLE system but a scheduled activity report from an onsite inspection states the following:

COMPLAINT/COMPLIANCE HISTORY: The facility has a long history of odor issues dating back to 1995. Since the last inspection on August 27, 2015, the facility has been issued three Violation Notices, dated October 12, 2015, July 21, 2016, and August 3, 2016, for emitting nuisance odors in violation of Rule 901. These odors are suspected to be associated with the waste stabilization/solidification process. At the time of inspection, the outstanding violation notices were unresolved and the facility was considered to be in noncompliance with Rule 901.

Note: When investigating complaints alleging odors from EQ Detroit, the inspector should also consider Greater Detroit Resource Recycling as a possible source, especially if the complaint is nondescript, or if the odors are described as "rotting" or "garbage". Both sources have potential for off-site odors; however, the odor from each source is distinctly different in character.

SAR_20160819.pdf – August 19, 2016

VN_20160923.pd – September 23, 2016

Mr. Todd Zynda of the AQD performed the complaint investigation from approximately 9:30 PM to 10:30 PM on September 20, 2016, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04E; General Condition 6	Moderately strong (Level 3) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20161013.pdf (also for October 4, 2016 complaint)

VN_20161004.pdf – October 4, 2016

Mr. Todd Zynda of the AQD performed the complaint investigation from approximately 8:40 PM to 10:10 PM on September 23, 2016, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04E; General Condition 6	Moderate to strong (Level 3 to 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20161013.pdf (also for October 4, 2016 complaint)

VN_20161123.pdf – November 23, 2016

Mr. Todd Zynda of the AQD performed the complaint investigation from approximately 10:45 AM to 11:45 AM on November 21, 2016, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04E; General Condition 6	Moderate to strong (Level 3 to 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20161214

VN_20170126 – January 26, 2017

Mr. Todd Zynda of the AQD performed the complaint investigation from approximately 7:45 PM to 8:45 PM on January 24, 2017, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b); PTI No. 269-04E, General Condition 6	Moderate to strong (Level 3 to 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.
EUTREATMENT	R 336.1901(b); PTI No. 269-04E, EUTREATMENT, Special Condition III.3	A steam plume was observed emanating from the Chem-Fix Building throughout the duration of the investigation indicating that negative pressure requirements are not being met.

Response: RVN_2017021

VN_20170427 – April 27, 2017

On March 14, 2017, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), was notified by U.S. Ecology that the company had removed waste material from Vaults V-701, V-704, and V-706 in the Chem-Fix building at its Detroit South facility, located at 1923 Frederick, Detroit, Michigan, on March 10, 2017, after the building was damaged during a storm which occurred on March 8, 2017. The damage to the building prevented the building from being operated under negative pressure during the removal of this material. As a result, the following violation occurred:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	PTI No. 269-04E; Special Condition EUTREATMENT, III.3	Facility processed and unloaded material while the Chem-Fix building was not under negative pressure.

Response: RVN_2017051

VN_20170815.pdf – August 15, 2017

Mr. Todd Zynda of the AQD performed the investigation from approximately 8:35 PM to 9:20 PM on August 13, 2017 and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04E; General Condition 6	Moderate to strong (Level 3 to 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20170831

VN_20180620.pdf – June 20, 2018

Mr. Todd Zynda of the AQD performed the investigation from approximately 8:30 PM to 9:30 PM on June 8, 2018, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 to 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20180711

VN_20180731.pdf – July 31, 2018

Mr. Todd Zynda of the AQD performed the investigation from approximately 9:45 PM to 10:30 PM on July 17, 2018, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderately strong (Level 3), persistent lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20180813

VN_20180808.pdf – August 8, 2018

I performed the investigation from approximately 7:05 AM to 8:00 AM on August 2, 2018, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4), persistent lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20180813

VN_20180920.pdf – September 20, 2018

Mr. Todd Zynda of the AQD performed the investigation from approximately 8:18 PM to 9:15 PM on September 18, 2018, and observed the following air pollution violation:

Process Description	Rule/Permit Condition Violated	Comments
Chem-Fix	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderately strong (Level 3), persistent lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20181009

VN_20190909.pdf – September 9, 2019

During the investigations, AQD staff observed the following:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4), persistent lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20190919

VN_20200422.pdf – April 22, 2020

During the investigation, AQD staff observed the following:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4), persistent lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20200513

VN_20200622 – June 22, 2020

AQD staff performed an investigation from approximately 10:20 PM to 11:45 PM. During the investigation, AQD staff observed the following violation:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4), persistent burnt lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20200713

VN_20200824 – August 24, 2020

AQD staff performed an investigation from approximately 4:00 PM to 5:00 PM. During the investigation, AQD staff observed the following violation:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4), burnt lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20200914

VN_20200917 – September 17, 2020

AQD staff performed an investigation from approximately 9:15 PM to 10:05 PM. During the investigation, AQD staff observed the following violation:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting areas downwind of the facility.

Response: RVN_20201009

VN_20201027 – October 27, 2020

AQD staff performed an investigation from approximately 9:10 PM to 10:20 PM. During the investigation, AQD staff observed the following violation:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting residential areas downwind of the facility.

Response: RVN_20201116

VN_20201207 – December 7, 2020

AQD staff performed an investigation from approximately 12:25 PM to 2:10 PM. During the investigation, AQD staff observed the following violation:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderate to strong (Level 3 and 4) lime dust and chemical-type odors, attributable to U.S. Ecology's operations, impacting residential areas downwind of the facility.

Response: RVN_20201218 (scentometer explained)

VN_20210726 – July 28, 2021

As a result of the inspection, AQD staff observed the following violations:

Process Description	Rule/Permit Condition Violated	Comments
FGOILRECOVERY	PTI No. 269-04H, FGOILRECOVERY, Special Conditions VI.2a, b, and c.	Scrubber ORP and pH meters were not properly operated and maintained from January 28 through March 18, 2020; scrubber flow meter not properly maintained and operated from October 15, 2018, through March 27, 2019.
FGOILRECOVERY	PTI No. 269-04H, FGOILRECOVERY, Special Condition VI.3d.	Scrubber ORP and pH not monitored and recorded from January 28 through March 18, 2020; scrubber flow meter not monitored and recorded from October 15, 2018, through March 27, 2019.

Response: RVN_20210813

VN_20211007 – October 7, 2021

Mr. Sam Liveson, EGLE-AQD, performed an investigation from approximately 7:28 PM to 9:34 PM on September 23, 2021. During the investigation, Mr. Liveson observed the following violation:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Moderately strong, objectionable (Level 3) odors, attributable to U.S. Ecology's operations, impacting residential areas downwind of the facility.

Response: RVN_20211028

VN_20211101 – November 1, 2021

Investigations were performed by Mr. Jonathan Lamb of the AQD on the following dates and times:

- October 18, 2021, from 10:10 AM to 10:55 AM
- October 19, 2021, from 11:30 PM to 12:15 AM
- October 26, 2021, from 7:50 PM to 8:40 PM

During each of these investigations, the following violation was observed:

Process Description	Rule/Permit Condition Violated	Comments
EUTREATMENT	R 336.1901(b) PTI No. 269-04H; General Condition 6	Persistent and objectionable odors of moderate to strong intensity (Level 3 and 4), attributable to U.S. Ecology's operations, impacting residential areas downwind of the facility.

Response: RVN_20211119

US Ecology's permit violations anger Detroit neighbors

Keith Matheny, Detroit Free Press

View Comments

A hazardous waste processing facility in Detroit — which could gain state approval to expand its storage facilities tenfold — has released excessive amounts of mercury, arsenic, cyanide and other toxic chemicals into the city sewer system more than 150 times since September 2010, a review of Great Lakes Water Authority records shows.

US Ecology is allowed to put pretreated chemical waste into the sewer system, but under strict, permitted requirements.

The Free Press, through the Michigan Freedom of Information Act, reviewed records related to the company's wastewater discharge permit going back to September 2010. The records are held by the Great Lakes Water Authority, the regional body that took over wastewater treatment operations from the Detroit Water and Sewerage Department on Jan. 1.

►**Related:** Yellow, foamy blob outside US Ecology was soap, company says

The records show frequent, sometimes alarming, violations of permitted maximum discharges on at least 20 hazardous chemicals or metals, either discovered by the authority during inspections or self-reported by US Ecology at its facility on Georgia Street near the Hamtramck border. The records also show that the company almost never provided a written explanation to Water Authority officials about why a violation occurred and why it wouldn't again in the future, a requirement of its permit.

US Ecology officials issued an e-mailed statement in response to Free Press requests for an interview. They stated the excessive discharges were infrequent — found in less than 1% of the more than 10,000 tests conducted over four years.

"While our goal is to eliminate all discharge exceedances, the ones that do occur tend to be very minor in nature and their frequency is low relative to the thousands of monitoring tests conducted annually," US Ecology spokesman David Crumrine said in the written statement.

►**DEQ:** We don't yet know full extent of Wurtsmith Air Base contamination

State and local regulators say the releases never threatened human health or the environment, never interfered with the wastewater treatment plant's processes, and didn't end up causing excessively toxic flows out of the plant and into the Detroit or Rouge rivers.

But environmental experts point to the potential cumulative environmental damage from even tiny amounts of some toxins not adequately controlled at times at the hazardous waste facility. And officials with another large Midwest city's sewer system — Milwaukee — say the number of permit violations at US Ecology raises red flags.

"We view anything over four or five exceedances" in a year "as bad news," said Bill Graffin, spokesman for the Milwaukee Metropolitan Sewerage District.

"The number, 150, you have there is way extreme from what we might see," added Sharon Mertens, director of water quality protection at Milwaukee's sewer district and head of its industrial wastewater pretreatment program.

While Milwaukee's sewer system does not serve any hazardous waste processing facility, it does accept chemical waste-treaters' discharges, Mertens said. It also has a "very large, diverse industrial base," Graffin said.

Residents angry

At the center of the Detroit controversy are local residents, already wary of the hazardous waste facility's proximity to their homes, schools, churches and playgrounds. They see US Ecology's violations as a sign the company can't fully control the industrial wastes already being moved through it. That bolsters their adamant stance that the facility shouldn't be allowed to expand by a DEQ that — particularly after the Flint water crisis — they don't trust to prioritize their well-being over economic interests.

"I'm horrified. This is not acceptable," said Diane Weckerle, who's part of a coalition of area residents opposed to the facility's expansion.

"It makes me furious," said Sharon Buttry, who lives in nearby Hamtramck.

Mark Covington has lived only about a mile from the facility all of this life.

"Even as an adult, I didn't actually know what they did there," he said. "People around here definitely don't know they are allowed to dump a certain amount in the sewer system."

What it does

The US Ecology facility, at 6520 Georgia St., takes in many of the region's most toxic chemicals from industrial processes, as well as very low-level radioactive byproducts primarily from oil and gas hydraulic fracturing, or

fracking. Located near the Hamtramck-Detroit border on the east side, the facility is within a mile-and-a-half of a public playground, Dickinson East Elementary School, Oakland International Academy charter school, several churches and scores of residential homes.

Records show that US Ecology had wastewater discharge violations in eight to 10 months of every year from 2011 through 2015. While most of the more than 150 violations involved violating daily limits, at least 23 violations involved excessive averages of specific toxic chemicals over an entire month.

Wastewater sampling occurs from under a manhole cover just outside US Ecology's facility, which is upstream of the public sewer, ensuring that the company's discharges are isolated for inspection.

The sampling results, at times, have been startling:

- In October 2012, the mercury level in US Ecology's wastewater measured 0.7 parts per billion — more than 3.5 times the permitted maximum.
- In a sampling taken in December 2010, the arsenic levels in the company's wastewater registered 53.6 parts per million, almost 350 times the permitted maximum.
- US Ecology was found to be in "significant noncompliance" when more than a third of measurements taken for titanium levels in its wastewater exceeded permitted maximums for six straight months, from March through August 2013.

Many samples

Despite some of the high numbers, Stephen Kuplicki, an industrial waste control manager with the Great Lakes Water Authority, concurred generally with US Ecology's position.

"Because the facility is so vigorously monitored, there are large numbers of samples taken and thousands of parameters that are tested for," he said. "This can lead to what looks like a large number of exceedances simply due to the large volume of samples."

The wastewater treatment plant itself must comply with federal environmental guidelines with its discharge, and US Ecology's violations have never led to a plant violation, or interfered with treatment processes, he pointed out.

"The plant is able to treat US Ecology's discharge and ensure the protection of the environment," he said.

It's more important that certain discharged materials from US Ecology don't consistently exceed regulatory limits, Kuplicki said.

"Through our stringent monitoring, we have been able to determine that no such patterns currently exist, and US Ecology has always been able to demonstrate compliance within 30 days of their written notice through verified sampling," he said.

Indeed, the records show time after time, after receiving a notice of violation, US Ecology officials remedied it by presenting their own, later sampling, conducted by a contracted laboratory, that showed the toxic chemical or metal no longer exceeded permitted maximums.

But compliance has often been short-lived. Records show 37 violations of titanium discharge levels from March 2011 to September 2015. After each violation — even when it was determined to be in "significant noncompliance" for titanium in 2013 — US Ecology was subsequently deemed back in compliance because it submitted new sampling showing a titanium level within permitted parameters — until the next violation, one to three months later.

"It's a mess," said Nicholas Schroeck, director of the Transnational Environmental Law Clinic at Wayne State University Law School.

"The question is, when you have a repeated lack of compliance, over and over again, are they ever actually in compliance?"

Among the requirements US Ecology faces is controlling the alkalinity of its wastewater. Regulations require pH levels lower than 11.5 units. (A pH level of 7.0 is neutral, with a smaller number more acidic and a higher number more alkaline.) In an April 1 letter this year from Water Authority Interim Director David McNeely to US Ecology officials, he announced changes to the company's wastewater discharge permit to require continuous pH monitoring, after the findings from two straight months of monitoring from Oct. 7 to Dec. 6, 2015.

"There were 322 instances of pH noncompliance greater than 11.5 units," McNeely stated, adding that US Ecology staff failed to self-report any exceedances to either Detroit Water and Sewerage Department or Great Lakes Water Authority staff.

"It is obvious that US Ecology exercises limited control of the pH of its discharge," McNeely stated.

A 2013 University of Maryland study showed acid rain and human pollution are making rivers more alkaline in the eastern U.S.

"It's like rivers on Rolaids," associate geology professor and study lead author Sujay Kaushal said in a 2013 release.

"We have some natural antacid in watersheds. In headwater streams, that can be a good thing. But we're also seeing antacid compounds increasing downriver. And those sites are not acidic, and algae and fish can be sensitive to alkalinity changes."

More alkaline waterways can mean more algae blooms and harder, more saline water, decreasing its drinkability and the difficulty in treating it.

Hard to regulate

Hazardous waste processing facilities are a very difficult type of industry to regulate because of the diverse materials they collect and treat, said Jodi Peace, the DEQ's industrial pretreatment specialist.

"Centralized waste-treaters in general have some of the worst compliance records of any type of industry that discharges into wastewater treatment plants," she said.

In the Great Lakes Water Authority's annual report to the DEQ for 2015, four other centralized waste-treaters in addition to US Ecology received at least one notice of exceedance.

US Ecology's compliance is actually better now than in years past, Peace said.

"I've been looking at it since the mid-1990s, when it was really bad," she said. "There would be many more violations, a lot of oil. There were a number of centralized waste-treaters back then who were in significant violation all the time."

The purpose of the industrial pretreatment program is to protect the sewer system from industrial wastes that might harm pipelines or infrastructure at the wastewater treatment plant, or that might interfere with the plant's processes, such as a chemical that kills off the bacteria used to eat organic wastes.

The maximum levels of toxic chemicals in industrial wastewater discharges are set under federal law so industries can't shop from state-to-state for more lenient standards, Peace said. They are set not only taking into consideration human health and environmental protection, but the type of industry and the wastes it produces, and the latest technologies available to reduce pollutants.

Ensuring US Ecology complies with its discharge permit falls to the Great Lakes Water Authority. But the DEQ has inspected the US Ecology facility multiple times since September 2010, and found it in compliance with

environmental law and regulations — even as discharge violations were popping up.

Violations that aren't chronic and recurring are "more of a naggy kind of little thing," Peace said. If it is not a significant noncompliance, "it's more of the routine, 'Show us you are back in compliance.'"

And any exceedances are not passing a cost onto Detroit sewer ratepayers, Kuplicki said.

"The discharge does not affect the treatment costs at the plant," he said.

Wastes that are difficult for bacteria to break down, such as suspended solids, are what adds significant cost to wastewater treatment, Peace said. Industries like US Ecology pay a surcharge for the volumes of excess solids they introduce to the system, she said. Great Lakes Water Authority officials declined to provide the Free Press with records indicating how much US Ecology pays for sewer service.

The biosolids left after clarification — settling tanks at wastewater treatment plants that remove solids — have water further removed and are then incinerated, taken to landfills or processed into fertilizer that is spread on area farms, Peace said. Those biosolids are tested for metals and other pollutants per U.S. Environmental Protection Agency guidelines, Peace said, and have not been found in violation.

The sheer volumes of wastewater moving into the Detroit sewer system — the largest single-site wastewater treatment plant in the U.S., and one of the biggest systems that combines sewage and stormwater drainage — may help explain why excessive levels in US Ecology's discharge don't amount to much upon reaching the plant.

"If you look at the size of the Detroit wastewater treatment plant, it would take an awful lot of anything to cause a problem — not that we're in favor of, 'Dilution is the solution,'" Peace said.

That's not good enough for Wayne State's Schroeck.

"When US Ecology is violating these pretreatment requirements, it shows symptoms of a larger problem that they can't, for whatever reason, stay within their permit parameters that are there to make sure our waters remain usable, fishable, swimmable places to be," he said. "If they can't handle it now, how are they supposed to handle it when the facility has expanded 10 times in size?"

A frequent violator of pretreatment requirements is "super-unfair to the taxpayers," whether or not those violations are leading to water quality problems at the wastewater treatment plant or in its discharge, Mertens at the Milwaukee wastewater treatment plant said. In addition to any treatment costs, some chemical and metal discharges, in excess, can rapidly corrode sewer infrastructure, she said.

"There's all kinds of issues that have a cumulative effect,"
Mertens said. "Under federal law, dilution is not the solution to pollution."

The Detroit Water and Sewerage Department conducted a visual inspection of sewer pipes outside US Ecology after a 2013 incident in which a mysterious foam rose up from a drainage basin near the facility. The foam was washed back down the drain by responding Detroit firefighters using hoses and wasn't analyzed, Peace said. The city's pipe inspection "identified large calcium deposits" under several manholes near US Ecology, she said.

Mercury overages are particularly troublesome, said Joel Blum, a University of Michigan professor of Earth and environmental sciences.

"Mercury is a toxin with unusual properties that make it a cause for concern even though the levels at the wastewater treatment plant may not be over the regulatory limits," he said.

Because mercury isn't broken down in wastewater treatment processes, it could end up in small amounts in the Detroit and Rouge rivers via discharge,

or in the atmosphere as a gas after dried sludge incineration that then settles on land and water, Blum said. The metal then "bioaccumulates" in the food web with every creature that takes it in — a tiny aquatic insect eats the mercury, gets eaten by a small fish, which gets eaten by a medium-sized fish, which gets eaten by a larger fish, magnifying the contamination the larger and more complex the fish or animal gets. Larger fish can see an increase in mercury concentration up to a million times higher than the concentration in water, Blum said.

"Thus, it is not only the concentration of mercury released to waterways and the atmosphere that is important, but the total amount of mercury, even if it is present at low concentrations," he said.

Such chemicals and metals, Mertens said, "don't just disappear." They have to be dealt with, one way or another.

"I think it's especially disturbing that a company that makes its business out of that whole concept — that you have to treat waste — is passing it along," she said. "That's just not a good thing."

More needs to be done to force consistent compliance with US Ecology, said David Holtz, chairman of the nonprofit environmental group Sierra Club's Michigan Chapter.

"This sends a message to polluters that violating environmental rules and dumping hazardous wastes is no big deal if it happens in low-income, minority neighborhoods in Detroit," he said.

"DEQ Director Heidi Grether needs to deal with this and do so immediately. People want and deserve an environmental cop on the beat, not one that enables corporate polluters and doesn’t even let families in on the reality of what’s going on in their own neighborhood."

New license

The DEQ in July 2015 announced its intention to approve a new license for US Ecology that would allow it to increase hazardous waste storage in tanks and containers from 64,000 gallons to nearly 666,000 gallons. The public outcry was large, with demonstrations held outside the plant by opposed area residents.

Richard Conforti, the DEQ's permit engineer for the facility, said US Ecology did not ask for an expansion of its wastewater discharges, only its storage capacity. The company's permit with the Great Lakes Water Authority limits hazardous waste liquid discharges at a maximum of 144,000 gallons per day, with an overall wastewater discharge limit of 300,000 gallons per day.

"They would have to get that changed first before they could discharge more," Conforti said.

Crumrine, the US Ecology spokesman, said there will be no increased discharges to the sewer system associated with the storage capacity increase.

Even if such a sewer discharge increase was later allowed, the wastewater would still need to comply with permitted limits on hazardous chemical levels, Conforti said.

After a delay to respond to hundreds of public comments, the DEQ is continuing to consider approving the permit to allow US Ecology to expand its storage, he said.

Mosetta Jackson, 81, lives on Concord Street, about a half-block from the US Ecology facility, and has lived in the community for more than 60 years, raising seven daughters there. She lives across from a public playground. She opposes the proposed US Ecology expansion, but doesn't expect the DEQ will listen to her and others.

"We're ignored because we're a poor, black neighborhood," she said. "We're worried about what it's going to mean to our health."

Contact Keith Matheny: 313-222-5021 or kmatheny@freepress.com. Follow on Twitter @keithmatheny.

Farah Kader, Erin Finn, Lauren Bacans-Grounds
University of Michigan School of Public Health

A health impact assessment to evaluate the expansion of U.S. Ecology Detroit-North

Introduction

This Health Impact Assessment (HIA) will examine the proposed expansion of the U.S. Ecology Detroit North Facility and the renewal of its Part 111 permit, using the precautionary principle and environmental justice as guiding frameworks. Our assessment will focus on Hamtramck, the city in closest proximity to U.S. Ecology Detroit North. We will also concentrate our HIA on the most vulnerable populations in the city, namely, women, children, and immigrants from Yemen and Bangladesh. While ambient air quality is a significant concern in this region of Michigan, the expansion of U.S. Ecology is most likely to have an impact on groundwater and soil. Thus, exposure through these media will be the focus of this HIA. We will examine underlying values that ignite this controversy, including reasons for distrust of state government and uncertainty of risk. Finally, we will offer recommendations to the Michigan Department of Environmental Quality (MDEQ) to consider in its decision regarding U.S. Ecology's expansion and engagement with community members in the future.

U.S. Ecology Overview

U.S. Ecology Detroit North ("U.S. Ecology") is a hazardous waste storage and treatment facility located in Hamtramck, Detroit on 6520 Georgia St., just north of I-94.[i] Built in 1974, U.S. Ecology Detroit North was in operation prior to the establishment of state and federal regulations for hazardous waste handling and disposal operations, and was thus grandfathered into the 1976 Resource Conservation and Recovery Act governing hazardous waste. Consequently, there is a gap in regulation of U.S. Ecology's waste handling and its impact on health and the environment.[ii] U.S. Ecology is currently permitted by MDEQ to process 4,500 tons of toxic chemicals per day, including widely known endocrine disrupting compounds such as polychlorinated biphenyls (PCBs).[iii,iv] U.S. Ecology has a waiver for groundwater and soil testing after meeting structural requirements in the Part 111 administrative rules.[v]

An MDEQ Part 111 permit in Michigan allows licensees to manage hazardous wastes. As part of its license renewal, U.S. Ecology Detroit North submitted a proposal to expand operations by increasing storage of hazardous wastes from 76,000 to 677,000 gallons.[vi] There are no proposed changes in amounts of chemicals processed or released into water. In addition, the company plans to construct two more buildings, and it is unclear whether these buildings will be at least 60 meters from a residence, commercial, or recreational site in compliance with the Part 111 permit.[vii]

U.S. Ecology is also permitted by the Great Lakes Water Authority to release 300,000 gallons of treated chemicals into to the Detroit sewer system each day. However, the facility has a history of water violations. Between 2010 and 2016, U.S. Ecology released mercury, arsenic, cyanide and other toxic chemicals into the city sewer system in amounts exceeding its permit limitations more than 150 times.[viii]

MDEQ approved U.S. Ecology's Part 111 permit renewal and expansion in 2018. However, following petitions from local organizations, MDEQ opened the public comment period to last until April 12, 2019 and held a public hearing with Arabic and Bengali translators present on March 28, 2019.[ix] MDEQ will make its decision by an unspecified date in 2019.

HIA Guiding Principles

The precautionary principle states: "when an activity raises threat of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."[x] The exact human health outcomes of exposures to the endocrine disrupting compounds and other toxicants stored at U.S. Ecology Detroit North are not precisely known. There is a high level of uncertainty surrounding combinations of persistent organic pollutants, even in trace amounts. Regardless of the uncertainties, there are high stakes associated with even a small risk of harm, given the growing body of scientific research indicating the contributions of such environmental exposures to chronic health disparities in vulnerable populations.

While the precautionary principle is not traditionally applied in MDEQ's permitting mechanisms, there are opportunities to reduce harm by limiting the extent of expansion and imposing more rigorous oversight of U.S. Ecology. Although Michigan state law mandates that the MDEQ must grant a license to

a facility that meets regulations for hazardous waste, the MDEQ does maintain the jurisdiction to specify licensing conditions that would protect the surrounding community. The MDEQ Waste Management and Radiological Protection Division is primarily responsible for overseeing the facility's operations and relicensing process, and may address changes in licensing conditions and broader regulations. (see Recommendations).[xi,xii]

This HIA is also informed by principles of environmental justice, which the Environmental Protection Agency considers to be a key tenet of its work: "Environmental justice is 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." [xiii] This definition draws upon foundational work by People of Color Environmental Leadership Summit of 1991.[xiv] Thus, we will recommend approaches that are participatory and inclusive of community members who may be disproportionately exposed to the waste stored at U.S. Ecology.[xv]

The process of the HIA is an important way in which to engage the community to be impacted by the proposed expansion. Our aim is to help inform and describe potential mechanisms that "shift the locus of decision making and power relations, opportunities and avenues for community engagement are often limited." [xvi] Throughout this HIA, we will discuss role of community members and grassroots organizations who have been heavily involved in engaging MDEQ throughout U.S. Ecology's most recent renewal process, namely, The Coalition to Stop the Expansion of U.S. Ecology.

History of Hamtramck

The City of Hamtramck is in Wayne County, Michigan. It is surrounded by the City of Detroit and is 2.2 square miles. The city is five miles from the center of Detroit, with I-75 running along the city's western border and I-94 running near its southern border.

After Colonel Jean Francois Hamtramck took possession of Detroit in 1796, French settlers from Quebec established the Township of Hamtramck in 1798. German settlers soon followed, and Hamtramck was established as a village made of mainly German farmers in 1901.[xvii] In 1914, The Dodge Brothers Motor Car Company started operations for a 67-acre automotive plant, drawing a rapid influx of

European immigrants, largely from Poland.[xviii] Many of the Polish immigrants who relocated to Hamtramck for were already in the United States, often working as coal miners in other states. These workers, as well as immigrants directly from Poland, were attracted to the booming automobile industry of metro Detroit. They gave the neighborhood surrounding the Dodge Main plant the nickname, Poletown. From 1910 to 1920, the Hamtramck community grew from 3500 to 48,000 residents in total.[xix] In 1922, Hamtramck was incorporated as a city to protect itself from annexation by Detroit.[xx]

In 1985, General Motors relocated their Cadillac assembly plant from the Mexicantown Detroit neighborhood to the Detroit/Hamtramck Assembly facility, which required bulldozing Poletown. This development promised many new jobs for the neighborhood and entailed the demolition of six churches, hospitals, and hundreds of businesses. In addition, thousands of residents were displaced from the area, as the number of jobs the city estimated to come from General Motors was largely overestimated.[xxi] There are currently 1500 employees at the plant.[xxii]

Since the construction of the General Motors plant, the workforce in the area declined and the local average income decreased. From 2000 to 2007, Hamtramck was put into state receivership after running million-dollar deficits. Due to lower costs of housing, Hamtramck experienced another wave of immigration from Bangladesh and Yemen. Yemenis began migrating to the area in the 1980s, along with Yugoslavians and Albanians, to work in the auto industry.[xxiii] In recent decades, the war in Yemen has led to millions of displaced residents, many of whom joined the existing Yemeni community in Hamtramck. Additionally, Bengalis from New York City, where housing costs have dramatically increased, were also attracted to Hamtramck's low cost of living and large Muslim population. From the mid-1900s to the present, the percentage of residents of Polish descent decreased from 75 to 10 percent.[xxiv]

Demographics

Hamtramck has a relatively young population, with a higher rate of non-English speakers, a higher percentage of foreign-born individuals, and a lower citizenship [xxv] rate compared to the rest of Wayne County and nearby Detroit. 32.2% of Hamtramck residents are under the age of 18, while 21.8%

of Michigan residents are under the age of 18.[xxvi] This leads to special health concerns for vulnerable populations, including children and pregnant women.

The median income and employment rate are lower than the state.[xxvii] The 2016 median annual income for Hamtramck is $23,609, about $27,000 less than the median income for the State of Michigan, and $32,000 less than the national median income. [xxviii] The employment rate in Hamtramck is much lower than the county, state, or Detroit; 33.1% of women ages 16 and older are in the labor force, with an overall employment rate of 45.1% for men and women ages 16 and older. [xxix] It is likely that people who are unemployed remain at home or in the surrounding neighborhood, potentially accumulating exposure to toxicants brought to the facility and local emissions over time.

The city of Hamtramck also appears to have a larger white population than the county or Detroit, and a larger Asian population than the county, state, or Detroit (Table 1). However, due to limitations of the U.S. Census and the American Community Survey (ACS), it is difficult to collect data on immigrants from Yemen and Bangladesh and other groups of Arab and Southeast Asian descent.

Yemenis are Arab and considered to be from the Middle East and North Africa (MENA) region. Geographically, Arabs span the Middle East and the African continent. Twenty-two nations comprise the Arab world (collectively known as the Arab League), and each state is linguistically, religiously, racially, and culturally diverse. The U.S. Census data does not capture demographics of individuals of Middle Eastern origin, including Arabs from both the Mediterranean and Gulf regions. Rather, individuals who identify as Middle Eastern and North African (MENA) must elect “White” as their racial category on the Census, regardless of their race in reality.

For example, Arabs from Sudan and Somalia are similarly overlooked by refugee and immigrant advocacy organizations who seek to provide linguistically and culturally appropriate services to Arabic speakers. The lack of a MENA category on the census falsely inflates the proportion of Caucasian residents in the U.S. and prevents researchers from understanding the Middle Eastern demographics within individual localities. Similarly, Bengalis are from a predominantly Muslim area of Southeast Asia. This population may also be incorporated into the broader Asian category on the U.S. Census, which does

not account for multiple Southeast Asian subgroups.[xxx] This inhibits researchers from parsing certain characteristics or dimensions of vulnerability that are unique to Hamtramck's Bengali community.

It is critical to understand how these data collection barriers factor into the ways we understand the largely-Muslim Yemeni and Bengali neighborhoods of Hamtramck. In recent decades, government surveillance and forced disappearances of U.S. Muslims after the September 11, 2001 World Trade Center attacks have targeted individuals who are broadly associated with Islam and the Middle East.[xxxi] This blocks engagement from the Muslim community for study purposes. Arabs who have lived in the region are often too fearful and suspicious to participate in surveys, or provide accurate information about religion, language, and ethnicity.[xxxii] Without proper survey tools for capturing the multiplicities of identity, large-scale surveys such as the ACS are not helpful for understanding these groups' vulnerabilities and strengths.

It is possible to broadly estimate social vulnerability in Hamtramck using data collected by the ACS that is not related to race and ethnicity. One survey question refers to "linguistically isolated households," in which no one over the age of 18 speaks English. Other questions ask residents about home ownership, transportation, disability, and other factors. The Centers for Disease Control and Prevention uses geospatial analysis of these data to create a Social Vulnerability Index (SVI), ranking areas of the U.S. from highest to lowest vulnerability. Figure 1 shows the 2016 SVI map of Wayne County, showing Hamtramck to be among the top 25 percent most vulnerable regions in the United States based on four broad criteria: socioeconomic status, household composition/disability, race/ethnicity/language, and housing/transportation.[xxxiii]

Community organizations and engagement

It is important for MDEQ to leverage existing partnerships between community members, grassroots organizations, faith-based groups, local politicians, and other stakeholders to engage the public in the Part 111 permit decision-making process (see Recommendations). Local organizations have already mobilized community members to attend hearings and make comments to MDEQ. Members of Michigan Citizens for Water Conservation, International Hope Center, Great Lakes Environmental Law Center, and

other organizations recently formed the Coalition to Oppose the Expansion of U.S. Ecology.[xxxiv] This group petitioned the agency in 2018 to extend the public commenting period and provide translators at a public hearing on March 28, 2019. Comments from parents, teachers, advocates, and other members of the public at the hearing expressed strong opposition to U.S. Ecology's presence in the community. State Representative Isaac Robinson also voiced his opposition to the expansion.[xxxv]

Other grassroots organizations can engage communities concerned with environmental justice in Southeast Michigan. Delray Neighborhood House, for example, has worked with neighborhoods in Detroit concerning area pollution and some development projects like the US/Canada bridge. Detroiters Working for Environmental Justice and the Sierra Club Detroit chapter both have environmental justice programs that span a wide range of environmental issues.

Faith-based organizations can mobilize individuals who may be unaware of the U.S. Ecology expansion, including the al-Islah Islamic Center, the InterFaith Leadership Council of Metropolitan Detroit, St. Florian Church, and the Immaculate Conception Ukrainian Catholic Church. Cultural centers, such as the Yemeni American Leadership Association, may play a role in engaging immigrants in linguistically isolated households or are otherwise experiencing cultural barriers to civic participation.

The Hamtramck School Based Health Center, a collaboration between the Detroit Medical Center and Hamtramck public schools, aims to fill healthcare gap for underinsured children. ACCESS Community Health and Research Center, a Dearborn-based nonprofit that provides advocacy, resources and Arabic language services, also has breastfeeding and nutrition support programs for pregnant women and new mothers.[xxxvi] An established trust between community members and these health facilities may be helpful in reaching out to community members who are hesitant to become more civically engaged.

Population health information

Extensive health data has not been collected for Hamtramck on its own. Rather, the Wayne County Health Department collects information for the county as a whole, with the exception of the City of Detroit, which has its own health department.[xxxvii] Given Hamtramck is in such close proximity to

Detroit and is more demographically and economically similar to Detroit than to Wayne County, we may use health data collected by the City of Detroit as an approximation of Hamtramck's health conditions.

Table 2 in the Appendix summarizes the estimated health conditions in Hamtramck using Detroit data. Measures of health in these cities appear much lower than the rest of Wayne County and the State of Michigan. For example, Hamtramck has less healthcare access due to cost, fewer people with a primary care provider, and less health care coverage among those aged 18-64 years old. Rates of diabetes and asthma are also higher in Detroit/Hamtramck than in the rest of Wayne County and the state. Hamtramck has a higher preterm birth rate than the rest of Michigan, and it has been increasing.[xxxviii] It also has a higher infant mortality rate than the rest of the state.[xxxix] In addition, there are 66 primary care physicians for every 100,000 people, lower than the state average of 80.[xl]

Low healthcare coverage rates in Hamtramck can be attributed to low income and/or immigration status. Income-eligible citizens in Michigan may receive government-funded coverage if they are 138% of the federal poverty level.[xli] However, there is a gap between those who are eligible for Medicare and Medicaid services, and those who cannot afford to purchase private insurance. Based on the incomes observed in Table 1, this is likely to be an access barrier for many Hamtramck residents. Immigration can also hinder access. The federal government offers Medicare and Medicaid services to those "lawfully present" immigrants who are not U.S. citizens, including legal permanent residents, asylum seekers, and refugees. However, even for qualified noncitizens, there may be a 5-year waiting period for services. [xlii]

The federal Children's Health Insurance Program (CHIP) covers children in income-eligible families. In Michigan, CHIP also covers low-income pregnant mothers.[xliii] The state only guarantees coverage for emergency services to immigrant children. Nonprofit organizations often fill in the gaps in service and coverage from publicly funded perinatal and pediatric care (see Community Engagement).

Environmental exposure

According to the Environmental Protection Agency, out of all Michigan's postal zip codes, Hamtramck has the 27th-highest amount of toxic exposure. The highest levels of toxic exposure in the state are in southwest Detroit due to a high concentration of industrial facilities. Hamtramck has been

impacted by these nearby factories, particularly with regards to lead emissions. Hamtramck is also exposed to air emissions from Detroit's incinerator, closed in 2019, as well as the GM Poletown plant.[xliv]

Most of Hamtramck is within a 2-mile radius of the U.S. Ecology hazardous waste facility. While the U.S. Ecology Detroit North plant does not store PCB contaminated materials, they do process them.[xlv] PCB wastes are stored at the U.S. Ecology Michigan site in Belleville, MI, which received federal approval for a change in landfill lining that would allow U.S. Ecology Michigan to "continue to develop its PCB capacity of 12 million cubic yards."[xlvi] This change will likely lead to increase in the amount of PCB waste processed for storage in the newly expanded Belleville facility, given that that "U.S. Ecology is the only commercial hazardous waste landfill in Michigan and the only landfill in EPA Region V with approval to accept PCB Contaminated wastes."[xlvii]

In 2017, the Coalition to Oppose the Expansion of U.S. Ecology requested independent soil sampling of the Georgia Street area, where the facility is located. The findings included soil samples in public spaces that contained 1.6-6.3 ppm of arsenic, almost 20 times the EPA safety limit in soil. Pace Analytical Services Inc., an environmental testing laboratory based in Minnesota, conducted the soil analysis. Groundwater monitoring reports from 2003, conducted by Midwest Analytical Services Inc. in Michigan did not detect heavy metals in groundwater, but did find 340-470 mg/L of sulfate.[xlviii]

Susceptibility of vulnerable groups to exposure

The integrity of the clay liner meant to protect the aquifer is not certain. It is not improbable that chemical contamination can reach groundwater sources and top soil. Ingestion of toxicants due to soil contamination can be a risk for children with frequent hand-to-mouth behaviors and those who grown their own food just blocks away from U.S. Ecology. Researchers have hypothesized that plants uptake PCBs through their root systems even in the presence of a clay barrier.[xlix] This leads to exposure via ingestion of food grown in areas where there does not appear to be a significant concentration in soil.

This particular immigrant population is vulnerable not only because of English proficiency gaps, but also due to the large number of families from agricultural backgrounds. Many individuals from Bangladesh and Yemen continue farming practices in their yards in Hamtramck, all near U.S. Ecology.

Urban farming has become common practice in this area for individuals to affordably feed their families, maintain cultural traditions, and supplement income through the sale of produce to restaurants.[l]

It is important to highlight U.S. Ecology's storage of arsenic, along with the discovery of this heavy metal in independent soil samples. Groundwater arsenic is a source of exposure around the world and is a leading cause of cancers and other chronic diseases in Bangladesh. Bengali immigrants are particularly concerned about this contaminant and the accumulation of exposure to arsenic over their lifetime. Plants can uptake arsenic from soil, making it a source of exposure from ingesting food grown on contaminated land.[li]

Exposure and health

Ample evidence links many of the hazardous chemicals that are processed or stored at U.S. Ecology, including heavy metals and PCBs, to adverse reproductive health outcomes. The volume of PCBs in industrial sites in Michigan, their classification as a persistent organic pollutant, and the vast array of toxic pathways make this chemical a major concern. Findings regarding PCB mechanisms of action are mixed. This is likely due to wide variety of congeners and the common occurrence of PCBs in chemical mixtures used in industrial facilities. However, environmental persistence and reproductive health risks posed by PCBs, even at low levels, are well documented in both animal and human studies.[lii]

For example, exposure to even low levels of estrogenic PCB congeners is associated with early pubarche in children, a known risk factor for breast cancer, childhood obesity, and polycystic ovary syndrome.[liii,liv ,lv,lvi] There is also a correlation between early menarche and social adversity later in life; behavioral research shows that early-maturing adolescent girls display more aggressive behavior, suffer more verbal and physical dating abuse, and have greater stress and depressive symptoms.[lvii,lviii ,lix] Some have proposed that PCBs furthermore suppress the limbic system, which results in reduced motivation for social behaviors and the induction of depressive-like symptoms.[lx] Furthermore, associations between PCB exposure and longer time-to-pregnancy have been found.[lxi,lxii]

Additional evidence details the carcinogenicity, neurotoxicity, and reproductive toxicity of heavy metals. Mercury and arsenic are stored and processed at U.S. Ecology Detroit North, both inducing

hormonal changes that affect the menstrual cycle, ovulation, and fertility. [lxiii] Mercury is associated with reproductive disturbances including stillbirth, spontaneous abortion, congenital malformations, infertility, and inhibition of ovulation.[lxiv] Current literature, including studies of human and animal biomarkers, suggests that these effects are mediated via epigenetic modification such as DNA methylation.[lxv]

The proposed increase in storage of chemical pollutants will involve an expected increase in delivery of chemicals to U.S. Ecology by truck, and subsequent noise and air pollution in the community. There is increasing evidence of associations between occupational noise exposure and adverse reproductive health outcomes including low birthweight, preterm birth, and small for gestational age.[lxvi] [lxvii] Mechanistic studies demonstrate potential biological pathways between excessive noise exposure and implantation failure, dysregulation of placentation, and a decrease in uterine blood flow.[lxviii] In addition, noise is known to increase stress levels, which in turn can have both acute and chronic effects on in utero and early life development.[lxix] Thus, this HIA will include more rigorous monitoring of noise levels, in addition to groundwater and soil, in the Hamtramck area.

Recommendations

Part 111 permit adjustments

The extent of U.S. Ecology's proposed expansion calls into question several aspects of the corporation's Part 111 permit that warrant more rigorous attention from MDEQ. First, we recommend delaying approval of U.S. Ecology's expansion until independent groundwater and soil testing results are formally conducted. In the absence of up-to-date groundwater monitoring tests, MDEQ must determine whether contaminants have reached aquifers and wells in the vicinity of U.S. Ecology, or can reach these groundwater sources in the future. In addition, the presence of arsenic in tested soil samples on Georgia Street indicates that heavy metals transported and stored to U.S. Ecology can be found in public spaces outside the facility. It is also important to note that MDEQ may deny or require greater isolation distances of proposed facilities in accordance with Michigan Administrative Rule 299.9603.[lxx]

Another avenue is to withdraw U.S. Ecology's Waiver for groundwater and soil monitoring. U.S. Ecology is seeking renewal of a waiver from the requirement for it to operate a groundwater monitoring

program and a soil monitoring program. A waiver is allowed if a qualified geologist or geotechnical engineer finds that there is no potential for migration of liquid to the uppermost aquifer during the active life and post-closure care period of the facility. However, recent independent soil testing results support the need for MDEQ to reinstate soil and water monitoring program requirements in U.S. Ecology's Part 111 permit. Furthermore, a letter from the Great Lakes Environmental Law Center (GLELC) to the Wayne County Commission Committee on Health and Human Services also argues that three in-ground hazardous waste treatment units should be technically reclassified as surface impoundments, which are subject to more rigorous compliance monitoring requirements.[lxxi]

The proposed increase in storage of chemical pollutants will involve an expected increase in delivery of chemicals to U.S. Ecology by truck. Thus, we recommend requiring U.S. Ecology to monitor ambient air quality and noise pollution that may arise from the process of treating hazardous chemicals. In addition to limiting the extent of the expansion, U.S. Ecology should keep track of noise and air pollution levels to understand exposures during the construction of new facilities and increased traffic to the area.

Consideration of cumulative risk

MDEQ does not currently consider the cumulative risk posed to community members when assessing permit requests from individual licensees. This is a major point of contention regarding the Part 111 permit waiver. Even if a licensee operates within the limits of a Part 111 permit, those operations can still compound adverse health consequences and environmental quality in a given locality. In Hamtramck, a city with one of the lowest incomes in the country in a county with the highest rates of asthma, residents feel that allowing a hazardous waste facility to expand in such close proximity to families and children is perceived to be particularly unjust.

A statute in Minnesota requires the consideration of "cumulative levels and effects of past and current environmental pollution from all sources on the environment and residents of the geographic area within which the facility's emissions are likely to be deposited." The law is specific to South Minneapolis, where residents were disproportionately likely to be exposed to pollution sources. Requirements for a location to receive cumulative impact assessment are based on demographic and health information,

distance from a designated EPA superfund site, and busy roads.[xxxi] We believe such a statute can be implemented in Hamtramck and other parts of Detroit to protect Michigan's vulnerable populations.

Community empowerment and participation

The option to provide notices of a hearing and translation services at the public hearing into Arabic and Bengali is a recent development.[lxxii] The March 28 public hearing, called for by community members and organizations, took place only 15 days before closing the public comment period. This limited the time residents had to do follow-up research and submit comment. MDEQ also offered to give translations of the full hearing online, rather than in person at the time of the hearing. Less than 80% of homes have a computer, and less than 60% have a broadband internet connection.[lxxiii] Certified translators for languages of need should be present at all future community hearings.

This process has highlighted equity issues with MDEQ's approach to community engagement. Our final recommendation is to legislate the inclusion of community members in an organized dialogue, such as a citizen panel or a deliberative forum, to include stakeholders, elected officials, advocates, and demographically representative community members in the permitting process for hazardous waste facilities.[lxxiv] A mechanism of this sort that is legally mandated provides a way for public officials to gauge the opinion of members of the public on a divisive, technical, and political issue. Such a law can create forums for more deliberate public education and citizen engagement, so members of the public are better informed about hazardous waste facilities and risks they pose. In this way, citizen participation in decision-making not only sparks a shift in power, but also shifts the burden of proof to industries to show the extent of risk and safety of a hazardous waste facility near residents.[lxxv]

Monitoring and evaluation

Fundamental to any HIA are the principles of democracy and equity.[lxxvi] As such, democracy and equity must be the foundation for monitoring and evaluation of any HIA. In addition to the above recommendations, we suggest legislating of monitoring and evaluation measures that can address equity impacts over time.[lxxvii] We suggest an accountability mechanism aimed at addressing any adverse health impacts discovered in the monitoring process.[lxxviii] Finally, we will discuss who is responsible should

negative health and equity impacts be found, and discuss a mechanism by which these decision makers should create an improvement plan and report it back to the community.[lxxix]

Given U.S. Ecology Detroit North continues its operations, whether or not it expands, appropriate monitoring measures must be implemented. For example, short-term monitoring measures include annulment of the facility's waivers for water and soil testing (i.e., commencement of monitoring by MDEQ) in addition to public release of these water and soil test results. Longer-term monitoring should involve supervision of MDEQ's testing of U.S. Ecology Detroit North outputs by a community partner such as Coalition to Oppose the Expansion of U.S. Ecology. A further long-term priority should be measuring long-term changes in PCB concentrations in the Detroit River and analyzing this data for any associations with improved or stricter monitoring of U.S. Ecology Detroit North.

Given U.S. Ecology Detroit North expansion, appropriate monitoring would additionally include traffic noise levels tracking, new traffic routes of trucks delivering wastes, and inspection of containment facilities and their structural soundness. To address health and equity, these monitoring strategies can be compounded with further monitoring mechanisms. For example, the effects of increased or decreased noise levels from trucks effects on reproductive health components mentioned previously as well as the changes in PCB levels in garden plants in Yemeni and Bengali neighborhoods should both be monitored.[lxxx]

Furthermore, the levels of contaminants such as PCBs and heavy metals in groundwater near the facility should be measured and compared to levels deemed safe to be in drinking water, below those which have been found to cause adverse reproductive health outcomes and ideally using levels established using the precautionary principle.[lxxxi] Assessing the cumulative exposures to environmental hazards in the Hamtramck neighborhood should provide even more insight into the equity of health impacts of U.S. Ecology Detroit North. Additionally, monitoring the change in socioeconomic status of the Hamtramck community with emigration away from the facility by those who can afford it and how this affects exposures to other types of pollutants, which have been shown to disproportionately affect lower

socioeconomic communities in Detroit, will give insight into how this HIA and the U.S. Ecology Detroit North facility are affecting the health and health equity of the surrounding community.[lxxxii]

To maintain accountability for addressing adverse impacts arising during monitoring, we suggest the involvement of a community partner such as the Coalition to Oppose the Expansion of U.S. Ecology in the monitoring process. This partner can help hold MDEQ accountable with regards delivery of information in different languages languages (e.g., English, Arabic, Bengali, etc.) and help to disseminate it. This will help the community mobilize in the event of noncompliance. The MDEQ should be held responsible for defining and implementing violation fees and threshold levels for violations, and should release this information publicly. The MDEQ should hold itself responsible for ensuring health equity for the residents of Hamtramck living near the facility, with a community partner acting as a watchdog to hold the MDEQ accountable.

Finally, we recommend that U.S. Ecology provide funds for the recommendations above in order to reduce the costs to the state. As a national corporation, U.S. Ecology earned $504 million in revenue during the year 2017, a 6% growth from the previous year.[lxxxiii] The company is in the financial position to take more rigorous safety measures in its hazardous waste handling in such close proximity to residents.

Conclusion

We believe that the risk to the residents of Hamtramck through the expansion of U.S. Ecology is high and the permit should not be issued without intentional planning for monitoring to ensure that the history of violations does not continue. Expansion of this site should not be done without an eye toward the protection of the population from increased risk. Especially given the history of violations, the community surrounding U.S. Ecology should not be responsible for protecting themselves; MDEQ and U.S. Ecology must take the lead on protecting Hamtramck's residents through proper regulatory and monitoring action. MDEQ and U.S. Ecology must take the lead on protecting Hamtramck's residents through proper regulatory and monitoring action, using community partners to engage the public and allow their input to inform U.S. Ecology's Part 111 permit renewal, and the permitting of other hazardous waste facilities in Michigan.

Appendix

Table 1

Demographic	Hamtramck	Detroit	Wayne County	State of Michigan
Total population	21,985	672,829	1,750,000	9,900,000
Median Age	28.3	34	37.8	39.7
Age and Gender Distribution*				
Under 5	9.30%	7.30%	6.60%	5.80%
Under 18	32.20%	25.20%	23.70%	21.80%
65 +	8.30%	13.10%	15.10%	16.70%
Female	49.10%	52.70%	51.90%	50.80%
Male	50.90%	47.30%	48.10%	49.20%
Race/ethnicity **				
White	53.60%	10.20%	49.60%	75.30%
Asian	24.40%	1.80%	3.10%	2.90%
Black	14.70%	78.70%	38.60%	13.60%
Two or more races	4.47%	1.50%	2.40%	2.60%
Hispanic	1.44%	7.00%	5.80%	4.90%
Global Heritage in Order of Population ***				
1	Yemen	Mexico	Mexico	Mexico
2	Bangladesh	India	India	India
3	Bosnia and Herzegovina	Iraq	Iraq	Iraq
Number of Non-English speaking	13,100	66,840	220,633	859,731
Number of Arabic speakers	5,113	8,678	71,107	122,318
Number of Other Indic language speakers	4,203	4,299	12,629	30,522
No. of Serbo-Croatian language speakers	1,260	51	2,443	13,829
Non-English speaking Rate	64.60%	9.93%	12.61%	8.68%
Rate of Arabic speakers	23.10%	1.30%	4.00%	1.20%
Rate of Other Indic language speakers	19.00%	0.60%	0.70%	0.30%
Rate of Serbo-Croatian language speakers	5.70%	0.01%	0.10%	0.10%
Foreign Born*	42.30%	5.80%	8.70%	6.60%
U.S. Citizenship	77.3%	96.9%	96.3%	96.5%
2016 GINI index for income inequality******	0.566	0.485	0.485	0.485
Median Household Income	$ 23,609	$ 28,099	$ 43,464	$ 52,492
Average salary by gender***				
Male	$ 74,435	$ 63,533	$ 63,533	$ 63,533
Female	$ 67,382	$ 46,636	$ 46,636	$ 46,636
Number of employees	6,486	239,033	737,706	4,420,000
Employment Rate	8.71%	35.53%	42.15%	44.65%
Median property value	$ 47,300	$ 43,500	$ 105,300	$ 147,100
Persons in Poverty*	50.90%	37.90%	22.60%	14.20%
Number of residents living in poverty by race or ethnicity				
White	5,350	30,289	132,859	916,691
Asian	2,849	N/A	14,130	377,577
Black or African American	1,683	187,616	219,006	111,195
Share of poverty by race/ethnicity				
White	53.00%	12.60%	33.00%	61.30%
Asian	28.20%	N/A	3.50%	3.10%
Black or African American	16.70%	78.10%	54.40%	25.30%

* Data is from Census estimates. All other data is from Data USA.

** Census data does not capture demographics of individuals of Middle Eastern origin. Rather, individuals who identify as Middle Eastern and North African (MENA) must elect "White" as their racial category on the Census. Bengalis, who are not Arab, but from a predominantly Muslim area of Southeast Asia, may also be incorporated into the broader 'Asian' category on the U.S. Census.

*** The closest comparable data for the census place of Hamtramck, MI is from the public use microdata area of I-94 Corridor PUMA, MI. The closest comparable data for Wayne County and Detroit is from the state of Michigan.

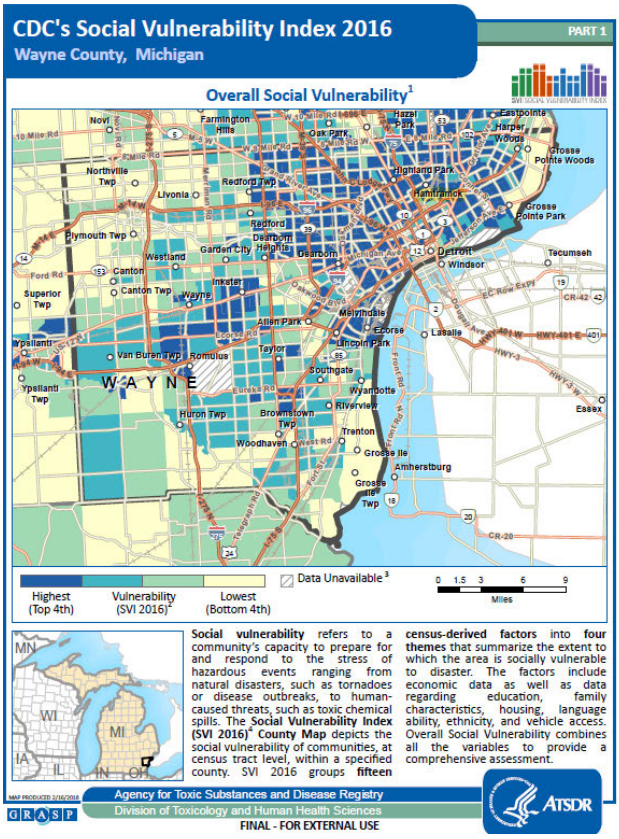
**** The 2016 GINI for I-94 Corridor PUMA, MI is higher than the national average of 0.485. In other words, wages are distributed less evenly in I-94 Corridor PUMA, MI in comparison to the national average. The closest comparable data for Wayne County and Detroit is from the state of Michigan. The GINI for the state of Michigan is the same as the national average of 0.485, meaning wages are distributed approximately the same as the national average.

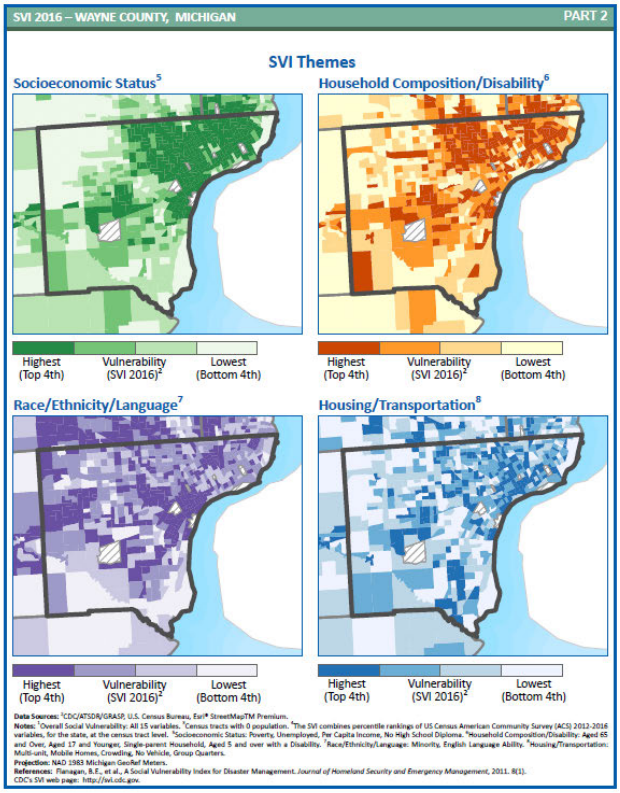
Table 2

Condition	Michigan	Wayne exc. Detroit*	City of Detroit
General Health, Fair or Poor	17.5%	18.2%	27.5%
Physical Health			
Poor Physical Health on at least 14 days in the past month	16.3%	16.9%	18.5%
Activity Limitation on at Least 14 Days in the Past Month	9.2%	8.7%	13.5%
Disability	25.6%	27.5%	30.8%
Weight Status: Obese	31.4%	31.5%	37.2%
Weight Status: Overweight	35.0%	33.6%	33.2%
Weight Status: Healthy	31.9%	32.7%	27.5%
No Leisure Time Physical Activity	24.9%	25.1%	34.7%
Mental Health			
Depression	20.7%	20.2%	21.1%
Poor Mental Health on at Least 14 Days in the Past Month	16.2	16.8%	18.8%
Health Care Access			
No Health Care Coverage Among Those Aged 18-64 Years	11.5%	12.7%	17.2%
No Routine Checkup in Past Year	27.7%	26.0%	24.3%
No Personal Health Care Provider	15.2%	12.8%	23.0%
No Health Care Access During Past 12 Months Due to Cost	13.3%	12.9%	21.3%
No Dental Visit in Past Year	30.7%	29.6%	49.6%
6+ Teeth Missing	15.7%	10.9%	25.0%
Cigarette Smoking			
Current	20.8%	21.9%	32.8%
Former	26.2%	27.5%	18.1%
Never	53.0%	50.6%	49.1%
Disease Status			
Asthma: Ever Told Have Asthma	15.8%	15.3%	20.9%
Asthma: Still Have Asthma	10.7%	7.3%	14.7%
Ever Told COPD, Emphysema or Chronic Bronchitis	8.5%	8.9%	12.3%
Heart Attack	4.9%	3.0%	5.5%
Ever Told Angina or Coronary Heart Disease	5.0%	4.9%	4.6%
Ever Told Stroke	3.4%	3.6%	6.0%
Ever Told Any Cardiovascular Disease	9.7%	10.2%	11.4%
Ever Told Cancer	12.3%	13.5%	6.9%
Diabetes	10.8%	11.3%	13.1%
Kidney Disease	3.5%	3.7%	4.2%

*Hamtramck is located in Wayne County, but it is not part of the city of Detroit. Its data is therefore included in this category.

Figure 1





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Author contributions

Lauren researched demographic and health information for Hamtramck and built the tables that demonstrated the differences between Hamtramck and the state of Michigan. She examined the ways that the chemicals of interest affected the vulnerable populations specifically. Finally, she introduced the HIA in the context of the selected frameworks. For the in-class presentation, Lauren was responsible for writing the demography and health slides, as well as writing and presenting the appeal to MDEQ slides.

Erin researched the information regarding the background of US Ecology Detroit North's current application for relicensing and the MDEQ's role and responsibility in this process. She also explored the reprotoxic effects of various chemicals stored in the US Ecology Detroit North facility. Finally, she explored mechanisms for monitoring and evaluation of the HIA recommendations. For the in-class presentation, Erin was responsible for the appeal to US Ecology to adhere to the recommendations proposed in our HIA.

Farah researched Hamtramck historical information, the demographic information and health information that were included in Lauren's tables, and social vulnerability measures. She wrote recommendations, and requested information from the Coalition to Oppose the Expansion of U.S. Ecology obtained through a FOIA request so we could have more substantive details about the company's plans. Farah also provided references for studies of reproductive toxicity of chemicals and included results from independent soil tests found in the FOIA documents. For the in-class presentation, Farah was responsible for providing the community's perspective of the expansion.