UNEQUALRESPONSE
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The Center for Health, Environment & Justice:
A Project of People's Action Institute

Chemical Contamination Community Case Studies

Short and long term exposure to hazardous substances can result in adverse health outcomes. While variation exists in the symptoms of chemically-associated health conditions, impacted communities all face a significant obstacle: the absence of a structured and efficient response in evaluating chemical exposure. The Center For Health, Environment & Justice has compiled case studies that illustrate problems in current federal response protocols. Such issues include the lack of community representation throughout an investigation, time-lags between when contamination is identified to the completion of a health investigation, flawed study designs, and lack of meaningful action following an investigation. These problems cause overburdened communities to endure extended chemical exposure and prevent them from receiving remediation or health coverage.

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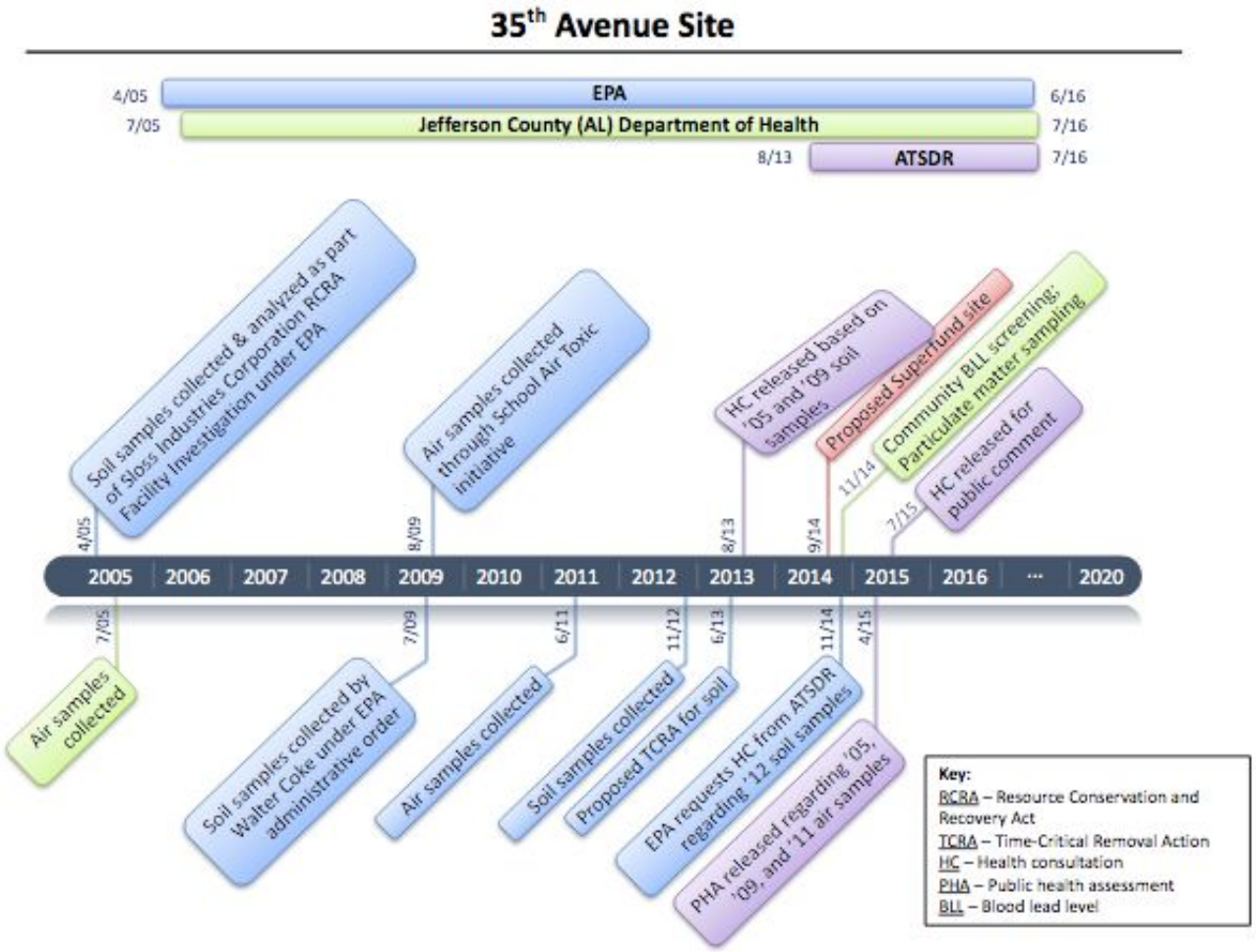
35th Avenue Site

Where: Birmingham, Alabama **Site Name:** Walter Coke, Inc. Site (35th Avenue Site) **Responsible party:** Walter Coke **Length of Investigation:** 6 years, 3 months (April 2009 – July 2015)	**Media & contaminants:** •Air – arsenic, benzene, 1,3-butadiene, carbon tetrachloride, chloroform •Soil – arsenic, lead, polycyclic aromatic hydrocarbons (PAHs)



Description

The contamination at the 35 th Avenue site in Birmingham, Alabama includes lead, arsenic, and benzo(a)pyrene, the most toxic member of a family of chemicals called polynuclear aromatic hydrocarbons (PAHs) coming from two coke plants located in the neighborhood. Soil and air samples were collected several times by both the EPA and the Jefferson County Department of Health starting in 2005. It took four years for EPA to come back and do additional testing and five years after that in 2014, the EPA asked ATSDR to evaluate the results of samples collected

in the neighborhood. 14 In January 2017, ATSDR released their Final Health Consultation report for the site. 14 ATSDR concluded that past and current exposures to arsenic found in surface soil
in some residential yards could harm people's health and that children were especially at risk

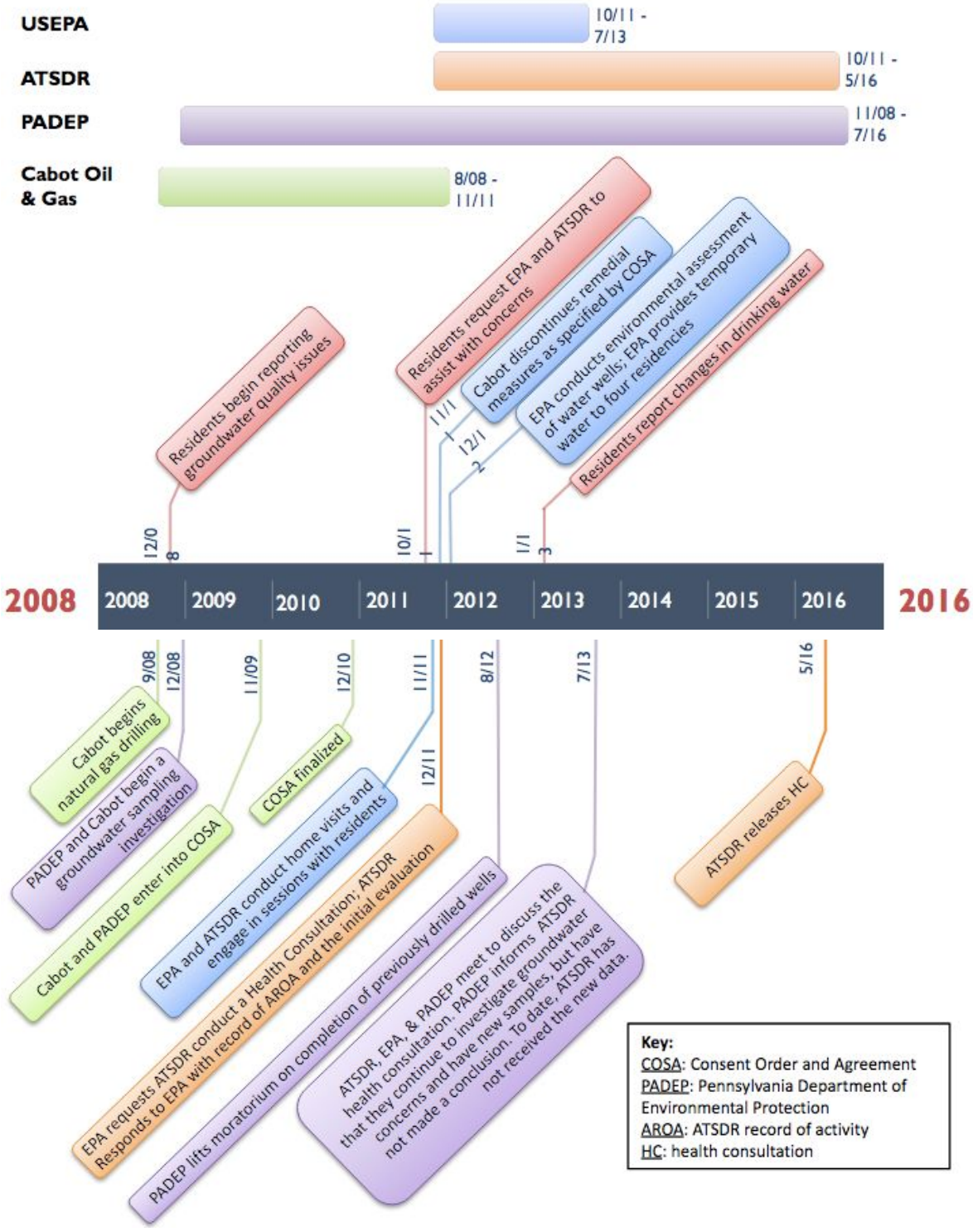
ATSDR Recommendations

- 4/15 Public Health Assessment
    1) ATSDR recommends JCDH continue to monitor for particulate matter at the North Birmingham and Shuttlesworth monitoring stations
    2) ATSDR recommends the EPA or JCDH continue to manage the risk posed by air toxics by
        a. Improving air quality in north Birmingham through regulation, enforcement, and collaboration with the community using approaches that go beyond regulation
        b. Resampling for air contaminants if there is a substantial increase in emissions of contaminants due to additional industry locating in the area or modification of existing industry in the area
- 7/15 Health Consultation (public comment version)
    1) Parents monitor their children's behavior while playing outdoors and prevent their children from intentionally or inadvertently eating soil
    2) Residents take measure to reduce exposures to residential soil and to protect themselves, their families, and visitors
    3) Parents follow the American Academy of Pediatric Guidelines and have their children tested for blood lead at 1 and 2 years of age
    4) Residents take steps to reduce lead uptake
    5) Residents take measures to reduce exposure to lead from other possible sources
    6) USEPA test the bioavailability of metals in the soil
    7) USEPA continue with its plans to remediate additional properties to reduce arsenic, lead, and PAH levels in residential surface soil

Dimock

Where: Dimock, Pennsylvania **Site Name:** Dimock Groundwater Site **Responsible Party:** Cabot Oil & Gas	**Length of Investigation:** 6 years, 5 months (December 2008 – May 2016) **Contaminants:** Methane, lead, lithium, sodium **Media:** Water

Dimock Groundwater Site



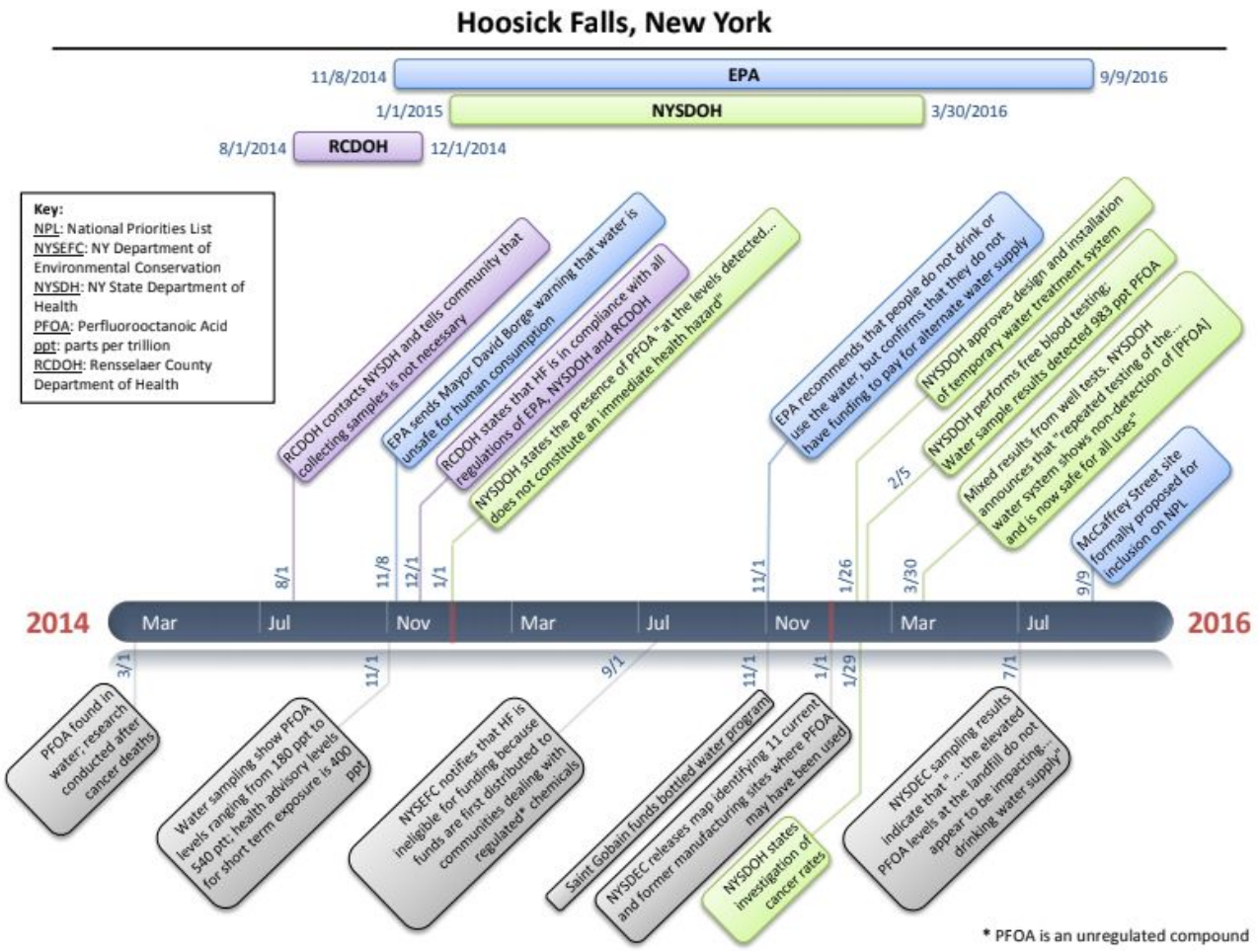
Description

Cabot Oil & Gas began natural gas drilling at this Pennsylvania site in September 2009. Just two months into the operation, residents began reporting issues with groundwater quality. Immediately, Cabot Oil & Gas and the Pennsylvania Department of Environmental Protection began a groundwater sampling investigation. Two years later in 2011, residents asked both EPA and ATSDR for assistance. EPA requested ATSDR to release a Health Consultation and in response, ATSDR released a Record of Activity document with initial recommendations. A total of five years passed between EPA's request in 2011 and the actual release of the Health Consultation in mid-2016.

ATSDR Recommendations

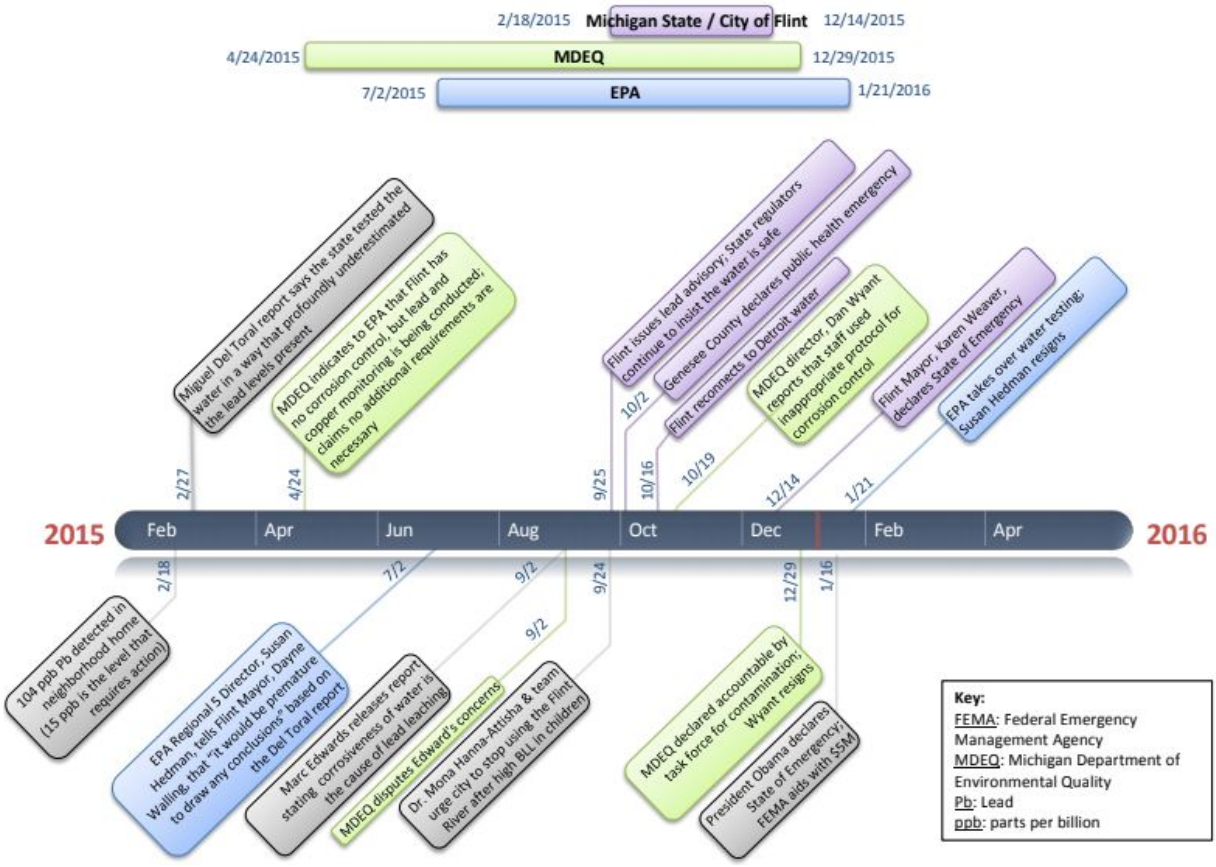
- 5/16 Health Consultation[1]
    1) Methane:
        a. Concentrations above 28 mg/L require immediate action, including wellhead ventilation and possibly treatment to remove the methane from the residential well water.
        b. Take precautionary steps for dissolved methane concentrations that range from 10 mg/L to 28 mg/L, including installation of a combustible gas monitor, ventilation of the home, ventilation of the well head, and removal of ignition sources in enclosed areas of the home.
        c. Methane detected at a concentration below 10 mg/L does not warrant immediate action except for monitoring the appearance of the water and possibly ventilating the home.
        d. For homes with dissolved methane in their well water exceeding 10 or 28 mg/L and that are not already being vented/treated, ATSDR recommends residents implement the protective actions described above.
    2) Lead: ATSDR recommends that homeowners with detectable lead in their drinking water take steps, such as well water treatment and flushing the water pipes prior to use, to reduce the lead before ingestion. Consistent with statewide childhood blood lead screening guidelines, every family is encouraged to discuss blood lead screening for children six years of age and under with their health care provider.
    3) Lithium: Homeowners of the following water wells should take steps, such as installing an effective well water treatment system or choosing an alternative drinking water source, to reduce exposure to the lithium in their wells. (see link)
    4) Sodium: ATSDR recommends that individuals on sodium restricted diets or that have infants discuss the sodium in their residential well water with their health care provider.
    5) Dimock private well water users should carefully consider the information about their well water quality, as well as options about appropriate water treatment and operation and maintenance of any systems installed on their private water well.
    6) All private well owners should test their drinking water on a regular basis.

Hoosick Falls



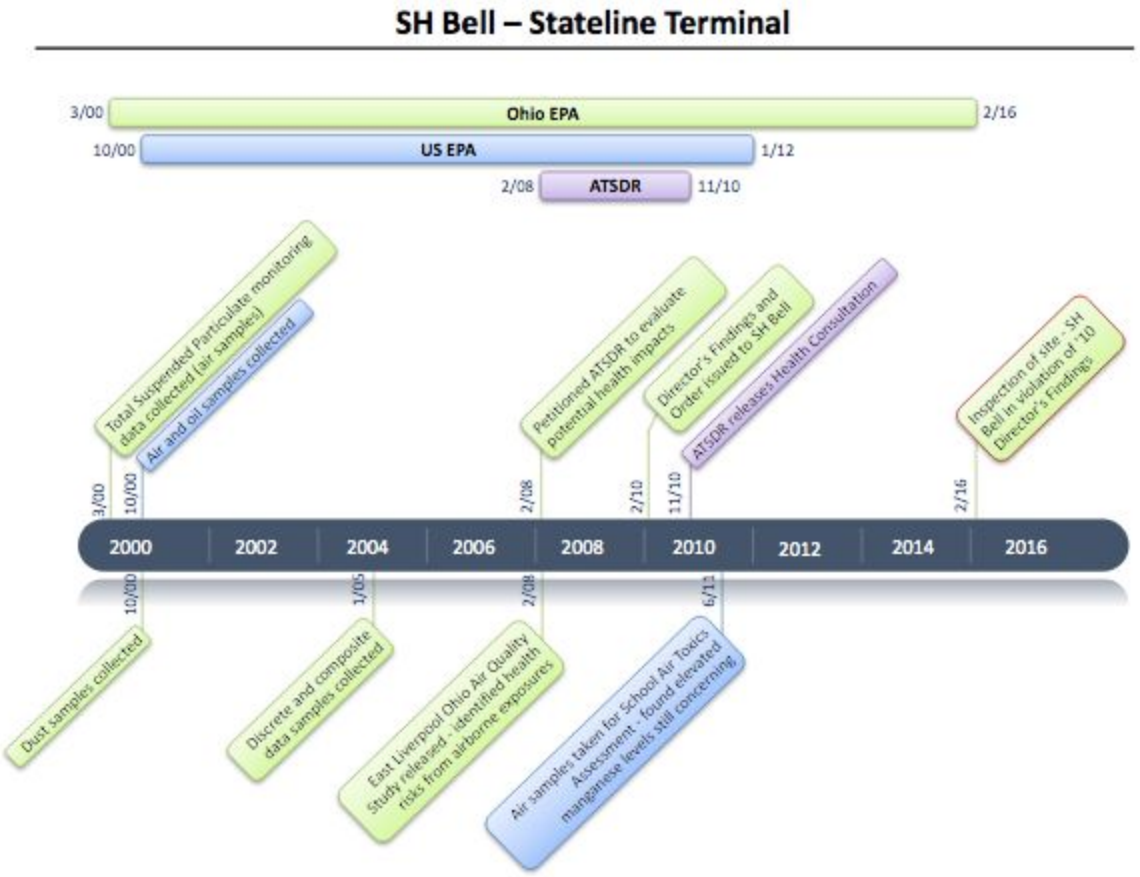
Flint, Michigan

Flint, Michigan



SH Bell Stateline Terminal

Where: Liverpool, Ohio **Site Name:** SH Bell Stateline Terminal **Responsible party:** SH Bell company	**Length of Investigation:** 9 years, 8 months (March 2000 – November 2010) **Contaminants:** Chromium, manganese **Media:** Air



Description

The USEPA began monitoring ambient air in East Liverpool, OH in 2000 in response to community concerns about emissions from the Waste Technologies Industries (WTI) hazardous waste incinerator. The initial testing found elevated levels of manganese and chromium at concentrations above public health levels. Some years later, the Ohio EPA identified the SH Bell Company, a raw products storage and packaging facility as the source of ambient manganese and chromium and started enforcement actions starting in 2008 with the state EPA Director's Finding and Orders. These orders required SH Bell to pave roads, initiate a dust suppression program, move outdoor storage piles into a covered storage area, and other ways to reduce emissions at the facility. In that same year, 2008, the state EPA petitioned ATSDR to evaluate potential health impacts of the contamination. ATSDR released a Health Consultation report in November 2010, ten years after the first acknowledgment that unacceptable levels of manganese were present in the ambient air in the city.

ATSDR Recommendations

- 11/10 Health Consultation
    1) Ohio EPA and/or US EPA should take immediate actions to reduce community exposures to manganese from fugitive dust emission from the SH Bell facility. [Ohio issued a Director's Findings and Orders to SH Bell on Feb . 8, 2010 that requires specific actions to reduce manganese emissions]

2) Ohio EPA and USEPA should continue an air monitoring program to verify that exposure to manganese is reduced in the East Liverpool community. The air monitoring objectives should be inclusive of the potential for residual exposure to air borne manganese-containing dust from contaminated surfaces (e.g. soil and roads).
3) ATSDR and the Ohio Department of Health should evaluate the incidence and/or mortality rates for neurodegenerative diseases in this community, in comparison to state-wide or national rates, as a potential indicator of health impacts from exposure to manganese.